

From Sustainable HRM to Employee Performance: A Complex and Intertwined Road

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Sustainable HRM is an emerging field that underpins the successful implementation of corporate sustainability initiatives. Grounded on the ability-motivation-opportunity theory, this study examines the effect of sustainable HRM on employee performance. To do so, we use a mediating model to explain the underlying mechanisms in sustainable HRM and its effect on employee performance. The results show that the road to achieving sustainable HRM from employees' performance is not straightforward but intertwined with a double-mediation effect of the perceived organizational rationale for sustainability and organizational identification. These findings indicate that an organization needs to find a match or congruency between sustainable HRM practices and employees' inner dispositions, in order to achieve a positive effect on employees' performance. Sustainable HRM practices should be congruent with the sustainability orientation of the organization, and its employees need to perceive this rationale in order to create stronger identification and thus to become more engaged and to better perform.

Keywords: sustainable HRM; organizational rationale for sustainability; organizational identification; work engagement; employee performance

Introduction

Over the last few decades, organizations have been continuously challenged to incorporate sustainability practices into their strategies, policies, and procedures (e.g., Atkinson, 2000; Bansal, 2005). Therefore, to achieve sustainable development, organizations must meet the economic, social, and environmental needs of their direct and indirect stakeholders in order to stay competitive (Bansal, 2005; Hediger, 2010; Porter and Kramer, 2011). These needs form the so-called 'triple bottom line' (Elkington, 1994) in which the human resource management (HRM) plays a critical role in enabling its successful achievement (e.g., Jabbour and Santos, 2008; Cohen et al., 2012; Kramar, 2014). Sustainable HRM has thus emerged as a new and needed approach to managing people beyond strategic HRM (Kramar, 2014) that leads to the reorientation of the HR function, and thus of the organization itself, toward sustainability (e.g., Ehnert, 2009; De Prins et al., 2014).

Sustainable HRM can be understood as 'the adoption of HRM strategies and practices that enable the achievement of financial, social, and ecological goals, with an impact inside and outside the organization and over a long-term time horizon' (Ehnert et al., 2016, p. 90). This definition acknowledges the effect of HRM on the reconciliation of the triple bottom line goals, rather than just on organization's economic and financial performance. Sustainable HRM is supported by theories which have linked sustainability and HRM (for example, 'sustainable work systems', Docherty et al., 2009), and it greatly extends previous perspectives, such as corporate social responsibility and corporate social performance. The theoretical umbrella of sustainable HRM also includes green HRM that comprises practices that influence employees' attitudes and behaviors toward the environment (e.g., Cohen et al., 2012; Renwick et al., 2013; Kramar, 2014). Thus, sustainable HRM, inspired by the three-pillar model of sustainability, incorporates activities which are usually associated with social responsibility and green HRM, such as occupational health and safety, equality and diversity, green hiring, green training, green performance management, and green compensation (Mariappanadar, 2003; Harcourt et al., 2007;

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Renwick *et al.*, 2008; Shen and Zhu, 2011; Ehnert *et al.*, 2016).

By adopting these practices, organizations are in effect signaling their consideration of employees as a long-term investment, rather than just a financial cost. This signal is vital to the successful implementation of sustainability initiatives (Ehnert *et al.*, 2016). For employees, this organizational signal can have the effect of a motivational factor that helps them feel their work is more meaningful (Albrecht *et al.*, 2015). The literature has shown positive links between several outcomes of work, such as engagement (e.g., Glavas and Piderit, 2009), performance (e.g., Newman *et al.*, 2015), and organizational identification (e.g., Kim *et al.*, 2010; Glavas and Godwin, 2013). Work engagement and organizational identification are crucial factors in employee performance, and the link between the two is described as ‘expressions of the individual’s relationship with their organization and with their work’ (Karanika-Murray *et al.*, 2015, p. 1027). A critical factor is employees’ perception that their organization’s sustainability is a core value, which is a process labeled as ‘organizational rationale for sustainability’ (Tosti-Kharas *et al.*, 2017). People demonstrate pro-sustainability behaviors mainly because they perceive and believe that their organization supports sustainability, regardless of their own personal beliefs.

Building on the literature, we propose that the best mechanisms through which sustainable HRM practices can affect employees is through the organizational rationale for sustainability and organizational identification. Our assumption is that this two-level mediation resembles the ‘role congruity theory of prejudice’ (Eagly and Karau, 2002; Eagly, 2004) that was developed in psychology. Therefore, we propose a new concept: the *role congruity of sustainability*. In practice, if an organization decides to implement sustainable HRM practices that aim to increase employees’ engagement and performance, this role congruity will only occur when there is a match between the centrality given by the organization to those practices and the employees’ inner dispositions. This match creates a kind of sustainability stereotype in which individuals recognize and value the sustainability practices of their organization. This stereotype becomes a link between the definitions of the organization and the self that leads to more engagement with work.

This study is organized as follows: the second section provides the theoretical framework and a set of hypotheses that serve as the background for the model in which the perceived organizational rationale for sustainability and the organizational identification mediate the relation between sustainable HRM and work engagement; the third section outlines the method that the study uses and the fourth section presents the results and a discussion on the main contributions for

management practice; the final section is the conclusion and includes limitations and directions for further research.

Sustainable HRM practices in the workplace

In business, defining sustainability is no easy task because of the disparate meanings found in the literature. For instance, some authors focus on the economic dimension by associating sustainability with the maximization of corporate value (Hediger, 2010); other authors emphasize the environmental dimension by considering an organization as behaving sustainably if it at least leaves the environment no worse for future generations (Hawken, 1993); and still others add societal value to the economic and environmental dimensions in a tripartite structure (Elkington, 1997). In the context of the latter perspective, which is more systemic and involves multi-stakeholders, HRM can play a pivotal role, as its practices can integrate sustainability principles, and thus promote employees’ engagement in this reorientation. Research on sustainable HRM is still in the early stages, and, although significant literature already exists (for a review, see De Stefano *et al.*, 2018), this topic is emerging as a new conceptual approach which is a promising new domain for theory building in the field of HRM (De Prins *et al.*, 2014; Ehnert *et al.*, 2016).

The literature on sustainable HRM covers ‘socially responsible HRM’ (Shen and Zhu, 2011; Newman *et al.*, 2016; Barrena-Martínez *et al.*, 2019) and also ‘green HRM’ (Renwick *et al.*, 2008; Guerci *et al.*, 2016). Socially responsible HRM is, to a great extent, related to corporate social responsibility (Cohen *et al.*, 2012; Kramar, 2014) and is usually reflected in companies’ sustainability reports, which aim to make their actions transparent to their multiple stakeholders. Furthermore, socially responsible HRM involves activities, such as diversity management, training, and occupational health and safety. In this way, organizations can meet the needs of an organization’s direct and indirect stakeholders (i.e., employees, customers, government, and communities) without compromising its ability to meet the needs of future stakeholders as well (Dyllick and Hockerts, 2002; Bansal, 2005; Hediger, 2010). This perspective represents a departure from the profit maximization and shareholder primacy, assuming that economic sustainability alone is not a sufficient condition for the overall sustainability of a corporation (Dyllick and Hockerts, 2002; Wagner, 2013; Ehnert *et al.*, 2014). Focus on the environmental dimension is the core purpose of green HRM. This stream of sustainable HRM is primarily concerned with

influencing and encouraging green practices and actions among employees and also to contribute to companies' environmental credentials through the 'greening' of existing HR functions (green recruitment, green training, green rewards, etc. – e.g. Renwick *et al.*, 2013).

More recently, scholars have been discussing the challenges associated with the triple bottom line approach. It has been largely suggested that this three-goal focus benefits employees, consumers, and the environment alike, leading to a 'win-win-win' situation (Elkington, 1994; De Prins *et al.*, 2014). Despite the seductive power of this idea and the considerable consensus around it, one should not neglect the existence of dilemmas, paradoxes, and tensions when implementing sustainable HRM actions in practice (Hahn *et al.*, 2015), including the risk of reducing sustainability to a mere 'mean' to meet financial or social 'ends', rather than being an end in itself (Ehnert and Harry, 2012). The need to address multiple goals at the same time can encourage competition, ambiguity, and conflict, which, in turn, can lead to unintended and unsustainable employee outcomes (e.g., role conflict, role ambiguity, and higher turnover rates) in a 'win-win-lose' situation (Bush, 2018). Another line of thought argues that sustainable HRM should go beyond a triple bottom line approach and embrace common good values, and thus contribute to solving the 'grand challenges' of our times (e.g., climate change, migration, unemployment). This new model, 'common good HRM', has been recently suggested by Aust *et al.* (2019) as a counterbalance to previous approaches, as these other approaches all have an inside-out view, whereby social and ecological purposes serve the traditional profit-oriented perspective. On the contrary, common good HRM adopts an outside-in view, which implies that companies should focus more on collective interests and on societal or ecological impacts, rather than on economic gain and self-interest (Aust *et al.*, 2019).

We use the approach of Ehnert *et al.* (2016), and Guerci *et al.* (2014) to develop a coherent framework that provides a sustainable orientation to HRM practices. Therefore, we emphasize the corporate commitment to refrain from pursuing purely cost-driven HRM practices that might harm employees and their families and communities. Instead, organizations nurture the employees as a long-term investment to improve functional flexibility (Mariappanadar, 2003; Harcourt *et al.*, 2007; Ehnert *et al.*, 2016). Considering the above-mentioned theoretical background of socially responsible HRM and green HRM, we obtain an integrated group of sustainable HRM practices, such as the ones aiming to promote equality and diversity, occupational health and safety, green hiring, green training, green performance management and green compensation.

Sustainable HRM practices, work engagement, and employee performance

Researchers commonly agree that HRM practices are a key factor for an organization to attain high levels of performance and sustainable competitive advantage in the marketplace (Wright *et al.*, 2005; Sun *et al.*, 2007; Shen and Zhu, 2011; Newman *et al.*, 2016). Researchers have widely followed the ability-motivation-opportunity (AMO) theory to examine the effect of such practices on individual and organizational performance (Zhang and Morris, 2014; Obeidat *et al.*, 2016; Shin and Konrad, 2017). The AMO theory claims that these practices influence employees into achieving organizational goals through their knowledge, skills, and abilities (i.e., ability-enhancing); motivation and effort (i.e., motivation-enhancing); and opportunity to contribute (i.e., opportunity-enhancing), affecting the individual and organizational performance (Appelbaum *et al.*, 2000; Lepak *et al.*, 2006; Jiang *et al.*, 2012).

By narrowing the scope to business sustainability, AMO theory is also relevant to explain how a wide range of HRM practices is beneficial for an organization to follow and implement an environmental management strategy (Renwick *et al.*, 2013). We propose that the same theoretical approach can be applied to the overall sustainable HRM practices and not only to the environmental axis. For example, sustainable HRM also includes ability-enhancing practices (e.g., occupational health and safety, and green training), motivation-enhancing practices (e.g., incentives for green performance), and opportunity-enhancing practices (e.g., equality and diversity, and the exchange of knowledge among employees). This theory argues that individuals should have the ability, motivation, and opportunity for sustainable practices to contribute to the achievement of organizational goals in this area (Buller and McEvoy, 2016). As a result, HRM practices that are supportive of sustainability attitudes and behaviors can encourage employees through two mechanisms: action and interest alignments (Colvin and Boswell, 2007). Through action alignment, employees develop their abilities for sustainability, such as health, safety, and environmental training, and are given the opportunity to act accordingly. However, to be effective in pursuing sustainability goals, employees also require an interest alignment. Such alignment occurs when both extrinsic and intrinsic rewards are linked to sustainability performance. In particular, when employees believe that their work is significant and meaningful, they are more willing to initiate actions that contribute to the organizations' sustainability goals. Therefore, organizations should enhance their employees' ability, motivation, and opportunity to implement initiatives that contribute to the achievement of sustainability goals (Colvin and Boswell, 2007).

Individual and organizational performance are among the outcomes associated with work engagement, as the literature states. As Bakker and Demerouti (2007) show, engaged employees are more creative, more productive, and are more willing to go the extra mile. These characteristics consequently influence job performance, thus strengthening the organizations' ability to improve its sustainability long term (Macey and Schneider, 2008; Kim *et al.*, 2012). Work engagement is the linking between the employees' selves to their work roles where they express themselves as physical, cognitive, and emotional (Kahn, 1990). This psychological state (May *et al.*, 2004) may be defined as a 'positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption' (Schaufeli *et al.*, 2002, p. 74). *Vigor* represents high levels of energy, the willingness to put effort in the job, and to persist when confronted with difficulties; *dedication* means the senses of significance, pride, and enthusiasm; and *absorption* refers to being fully concentrated and focused on the job (Schaufeli and Bakker, 2004). In essence, work engagement refers to a persistent and pervasive state that connotes involvement, commitment, enthusiasm, focused effort, and energy (Schaufeli *et al.*, 2002; Macey and Schneider, 2008).

Several studies have found empirical evidence that work engagement is positively related to in-role and extra-role performances as well as job, team, and organizational performances (Bakker *et al.*, 2004; Salanova *et al.*, 2005; Bakker and Demerouti, 2007; Tims *et al.*, 2013; Yalabik *et al.*, 2013; Mäkikangas *et al.*, 2016; Schneider *et al.*, 2018). In the same vein, Kim (2014) finds evidence that indicates that work engagement not only influences job and financial performance and profits, but also physical and mental health. Research has identified four reasons why engaged workers perform better than nonengaged workers: (1) they often experience positive emotions such as joy, enthusiasm, and happiness; (2) they experience better health conditions; (3) they develop their own job and personal resources; and (4) their engagement is contagious to others (Bakker and Demerouti, 2008).

Based on this theoretical background, we propose the following hypotheses:

Hypothesis 1a. Sustainable HRM practices are positively related to work engagement.

Hypothesis 1b. Work engagement is positively related to employee performance.

Hypothesis 1c. Sustainable HRM practices are positively related to employee performance.

Perceived organizational rationale for sustainability and organizational identification

The perceived organizational rationale for sustainability represents the degree to which employees perceive that their organizations support sustainability (Tosti-Kharas *et al.*, 2017). Employees develop their perceptions based on the strategic rationale disclosed by the corporate members (e.g., mission, policies, and practices), and organizational culture (e.g., exposed values and beliefs) (Glavas and Godwin, 2013). For example, the research demonstrates that organizational communication of a vision toward sustainability along with supervisory encouragement enhances employees' environmental initiatives (Ramus and Steger, 2000). This approach assumes that before acting, employees make judgments not only about whether sustainability appears to be a priority for their organization, but also about its rationale for why sustainability matters.

Organizational identification refers to people's perception of oneness with an organization. A person's self-concept has the same attributes that he or she believes the organization has, and this agreement is central and salient for self-definition. Due to this connection, the employees experience the organization's successes and failures as their own, as they see the organization to be part of themselves (Mael and Ashforth, 1992; Dutton *et al.*, 1994). The research on organizational identification argues that the employee's perceived level of attraction to an organization's image is strongly related to the level of identification the employee has with the organization's values, beliefs, and goals (Ashforth *et al.*, 2008).

The research shows that the employees' perceptions about the organization's orientation to corporate social responsibility are even more important than the organization's actions in determining organizational identification (Glavas and Godwin, 2013). Indeed, when employees perceive that the external and internal images of their organization's orientation to social responsibility are strong, they identify more with their organization (Glavas and Godwin, 2013). Moreover, employees have stronger organizational identification when they perceive that their organization supports their own initiatives toward the environment (Lamm *et al.*, 2015). Based on this line of reasoning, we propose that an organizational rationale for sustainability mediates the relation between sustainable HRM and organizational identification. When employees perceive that their organization is implementing sustainable HRM practices and is integrating them into a coherent sustainability strategy, which is a top priority for the organization to be successful, they are more likely to strongly identify with their organization. Consequently, we propose the following three hypotheses:

Hypothesis 2a. Sustainable HRM practices are positively related to an organizational rationale for sustainability.

Hypothesis 2b. An organizational rationale for sustainability is positively related to organizational identification.

Hypothesis 2c. An organizational rationale for sustainability has a mediator role in the relation between sustainable HRM and organizational identification.

The literature also shows that organizational identification is positively associated with work engagement (Rich *et al.*, 2010; Karanika-Murray *et al.*, 2015; Zhang *et al.*, 2017). If an individual has a strong psychological bond with the organization, then he or she has internalized the organization's aims and goals that reinforces his or her willingness to be more engaged with work (Karanika-Murray *et al.*, 2015). According to the social exchange theory, employees become engaged in work to repay the organization for acting in their interest (Cropanzano and Mitchell, 2005). Engaged employees have a sense of energetic connection with their work, and their self-judgment is that of someone able to deal well with the demands of their jobs (Schaufeli *et al.*, 2006: 702).

Therefore, we use Schaufeli and Bakker's (2004) approach to test the work engagement at an aggregate scale. Thus, we propose the following hypotheses:

Hypothesis 3a. Organizational identification is positively related to work engagement.

Hypothesis 3b. Organizational identification has a mediating role in the relation between an organizational rationale for sustainability and work engagement.

Methodology

Participants and survey

Data for this study came from highly qualified employees working across a variety of organizations, occupations, and economic sectors. These employees were also enrolled in Masters degrees in Business at a Portuguese public university, where lectures were held after working hours. The researchers used the School's database to identify Masters students and then sent them an invitation to participate in the survey, together with a cover letter explaining the objectives of the study and a link to the questionnaire. The survey was carried out online and took place during September and October of 2017. The option

to carry out the survey only with Masters students who were simultaneously highly qualified employees was based on the researchers' own expectations regarding the level of sensitivity of the respondents to sustainability issues. Truthful responses should reflect the real level of implementation of sustainable HRM and green HRM practices in the respondents' organizations, and thus overcome the potential problem of these areas failing to establish sound practices in the organizations.

The scales used in this research were translated into Portuguese. A back-translation technique was used to guarantee that the two versions were equivalent in linguistic terms. In order to get early feedback about the structure, wording, and incongruities of the questionnaire, a pre-test was performed involving eight potential respondents (their responses were not included in the database). The questionnaire was then revised. The changes consisted of rephrasing and eliminating some duplications. The questionnaires were delivered to potential participants using Qualtrics, and the successfully completed ones were collected in the same manner. Participants were given assurances that the information gathered would be confidential, anonymous, and would be used for academic purposes only. Concise language was used to ensure that participants were able to accurately answer the questions. The scale items were alternated, the order of the questions was counterbalanced, and the Harman's single-factor was tested to avoid biasing effects (Podsakoff *et al.*, 2003; MacKenzie and Podsakoff, 2012). The survey covered 431 employees, and there was a total of 155 responses, which corresponds to a 36% response rate. Table 1 offers the demographical data of the sample.

Measures

The measures and scales regarding the constructs of interest in the study were selected from the existing literature and all exhibited sound psychometric properties in previous studies.

Sustainable HRM practices. We measured sustainable HRM practices using two scales. The first scale for socially responsible HRM was adapted from Barrera-Martínez *et al.* (2016), and Barrera-Martínez *et al.* (2019). This scale comprises 10 items divided into three dimensions: HR training and development, equality and diversity, and occupational health and safety. The second scale is for green HRM and was adapted from Guerci *et al.* (2016). This scale comprises 11 items with the following dimensions: green hiring, green training, green performance management and green compensation. Examples of items are: 'my firm creates a working environment that stimulates learning, autonomy, and a sense of aspiration and continuous improvement', 'my

Table 1 Summary of the demographic information

<i>N</i>	<i>155</i>
Age	
Average	32.35
St. dev.	9.16
Gender	
Male	32%
Female	68%
Years at school	
Average	17.21
St. dev.	4.03
Tenure (in years at work)	
<1 year	33%
1–3 Years	42%
> = 4 Years	25%
Being a supervisor	
Yes	35%
No	65%
Company ownership structure	
Public	13%
Private	76%
Voluntary (& others not specified)	11%
Company size	
Micro (< 10 employees and ... (& others not specified)	12%
Small (< 50 employees and ...	13%
Medium (< 250 employees and ...	17%
Large (> = 250 employees)	49%
Others (not specified)	9%
Business sector	
Primary + Secondary	15%
Tertiary	76%
Others (not specified)	9%

firm minimizes physical and emotional risks from work for employees and their families such as absenteeism, stress, occupational diseases and accidents at work', and 'my firm practices variable compensation based on environmental performance'. Employees were asked to rate the sentences referring to each sustainable HRM practice as they perceived it in the workplace on a five-point Likert-type scale ranging from one (strongly disagree) to five (strongly agree). In previous studies, these scales exhibited sound psychometric properties with Cronbach's alpha above 0.70 (Barrena-Martínez et al., 2016; Guerci et al., 2016).

Organizational rationale for sustainability. We assessed the organizational rationale for sustainability with a shorter version of Tosti-Kharas et al.'s (2017) model. The original formulation comprised an eco-centric rationale and an organization-centric rationale for sustainability, but this study only used the latter. We measured the organization-centric rationale for sustainability through four items and questions such as: 'my organization believes that a good reputation for environmental sustainability will appeal to our customers and clients' and 'my company believes that good

environmental practices can save it money.' Participants also rated their agreement or disagreement using the same five-point Likert-type scale.

Organizational identification. This construct was measured with six items drawn up by Mael and Ashforth (1992). Sample items were: 'when someone criticizes my organization, it feels like a personal insult', 'my organization's successes are my successes'. Participants again used a five-point Likert-type scale.

Work engagement. This construct was measured using the popular Utrecht Work Engagement Scale (UWES). Vigor was assessed with six items that referred to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. Sample items included: 'When I get up in the morning, I feel like going to work' and 'I can continue working for very long periods at a time'. Dedication was assessed with five items that referred to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. Sample statements included: 'I find the work that I do full of meaning and purpose' and 'I am proud on the

work that I do'. Absorption was measured with six items that refer to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly, and one forgets everything else around them. Sample items included: 'time flies when I'm working' and 'it is difficult to detach myself from my job'.

Employee performance. We assessed employee performance with an adapted list of job performance dimensions from Viswesvaran *et al.* (1996). These seven dimensions comprised the quality of work, quantity of work (or productivity), job knowledge, interpersonal competence, and effort. Sample items were: 'I know my job ...' and 'the amount of my job is ...'. Participants used a five-point Likert scale, ranging from one (worse than others) to five (better than others).

Control Variables. We used the variables of age, gender, years at school, tenure, and being a supervisor to control their influence on the dependent construct, work engagement. The previous studies on sustainability have used all of these constructs (Shen and Zhu, 2011; Shen and Benson, 2016).

Partial Least Squares - Structural Equation Modelling (PLS-SEM)

In this study, we use a PLS-SEM to examine a system of causal and mediating relations between the constructs. The PLS-SEM uses the estimation procedure of an ordinary least squares with the objective of minimizing the residual variance in the endogenous constructs. The research considers the PLS as an appropriate method for early-stage research models where the emphasis is on theory exploration, extension, and prediction (Henseler *et al.*, 2009; Hair *et al.*, 2014). In this study, we followed this approach for several reasons. First, because it explores the applicability of the hypothesized global model, namely the possibility of the double mediation effect of the perceived organizational rationale for sustainability and organizational identification. To the best of our knowledge, this model has not yet been tested in previous empirical studies. Second, this method is suitable for small samples and has a higher level of statistical power when compared to the Covariance-based SEM (CB-SEM) (Hair *et al.*, 2011). Finally, the data are non-normally distributed, and the PLS-SEM makes no assumptions regarding data distribution. However, there are some minimum requirements for a robust PLS-SEM model and usually these are referred to as the 10 times rule (Barclay *et al.*, 1995) that indicates that the sample's size should be equal to the larger of: (1) 10 times the largest number of formative indicators used to measure a single construct; or (2) 10 times the largest number of structural

paths directed at a particular construct in the structural model. This rule of thumb means that the minimum sample size should be 10 times the maximum number of arrowheads directed to a construct anywhere in the PLS model (Hair *et al.*, 2014). In this study, as the number of structural paths directed to the construct work engagement (WE) is 3, the minimum sample size should be 30. In addition, the statistical power analysis for multiple regression models shows that 59 observations are needed to detect R² values of around 0.25 with a significance level of 5% and a statistical power level of 80% for a maximum number of three arrows pointing at a construct (i.e., the number of arrows directed to the WE construct). This is in accordance with the more differentiated rules of thumb provided by Cohen (1992). In this study, the sample under analysis is above this limit and thus we can conclude that the sample size is sufficiently large for this analysis (Hair *et al.*, 2014). We used the PLS-SEM to perform the analysis of the existing relations between latent, not directly observable, variables (sustainable HRM practices, perceived organizational rationale for sustainability, organizational identification, work engagement, and employee performance). Because there is no established global goodness of fit criterion, the elements of the model's structure were separately evaluated regarding certain quality criteria for the reflective measurement model and the structural model.

Measurement model. To assess the measurement model, we evaluate the latent constructs with criteria such as internal consistency (composite reliability), indicator reliability, convergent validity (average variance extracted), and discriminant validity (see Table 2 for the results). All latent constructs considered in the model have good internal consistency and reliability with a Cronbach's alpha and a composite reliability above the threshold of 0.7 (Nunnally and Bernstein, 1994). In addition, all indicators have outer loadings that are statistically significant and above the cut-off value of 0.4 (Hair *et al.* 2014). Further, all constructs have average variance extracted (AVE) values above the threshold of 0.5, which is an indication that, on average, the construct explains more than half the variance in its indicators. These values confirm the convergent validity and the goodness of the model (Henseler *et al.*, 2009). To assess the discriminant validity, two criteria are used. First, we use the Fornell-Larcker criterion to compare the square root of the AVE values with the latent variable correlations (Fornell and Larcker, 1981). The square root of each construct's AVE should be higher than its highest correlation with other constructs. All computed AVE values are higher than any of the squared correlations of the other constructs. Second, we examine the indicators' cross loadings. All the indicators' outer loadings in their associated construct are higher than any loadings in the

Table 2 Convergent and discriminant validity of the measurement model

	<i>Composite Reliability</i>	<i>Cronbach's Alpha</i>	<i>AVE</i>	<i>EP</i>	<i>OI</i>	<i>ORS</i>	<i>SuHRM</i>	<i>WE</i>
EP	0.97	0.96	0.82	0.90				
OI	0.95	0.93	0.75	0.41	0.86			
ORS	0.95	0.94	0.84	0.31	0.67	0.92		
SuHRM	0.96	0.95	0.51	-0.03	0.17	0.53	0.72	
WE	0.98	0.98	0.74	0.76	0.65	0.55	0.16	0.86

Notes: Diagonal numbers in bold are the square root of the AVE. Numbers below the diagonal represent construct correlations. EP – Employee Performance; OI – Organizational Identification; ORS – Organizational Rationale for Sustainability; SuHRM – Sustainable HRM practices; WE – Work Engagement.

other constructs. Overall the reflective constructs considered in the model have good internal consistency and reliability and good discriminant and convergent validity (Gefen *et al.*, 2000).

Structural model. The PLS-SEM estimates the path coefficients that measure structural model relations. The significance of the path coefficients was computed through the bootstrapping of 5,000 random samples of 155 paths. The results, presented in Table 3 and Figure 1, show that all path coefficients are significant with the exception of the path between sustainable HRM and work engagement. Total effects account for each construct's sum of direct and indirect effects. All of the reflective constructs have Q^2 values above zero, which confirms a high predictive accuracy for the path model. The measures of age, gender, years at school, tenure, and being a supervisor are used as control variables. However, none of these variables has a significant effect on the dependent construct, work engagement.

In this study, the construct 'sustainable HRM practices' was defined at a higher level of abstraction to establish a high-order model, as is usually the case in the context of the PLS-SEM (Hair *et al.*, 2014). This high-order construct is comprised of two layers of constructs: socially responsible HRM and green HRM. In the PLS-SEM, establishing high-order or hierarchical component models involves testing second-order constructs that contain two

layers of constructs (Hair *et al.*, 2014). A bottom-up approach was used, in which the two first-order constructs are treated as subdimensions of a more general construct of 'sustainable HRM practices' in the PLS-SEM. This approach aimed to reduce the number of relations in the model and to decrease collinearity among the constructs. To assess discriminant validity, we examined the indicators' cross loadings. The results showed that one indicator's outer loading for the respective construct is greater than all of its loadings in the other construct. In addition, the AVE values presented are higher than those of any of the squared correlations of the other constructs.

Results and discussion

The results in Table 3 and Figure 1 do not fully support Hypothesis 1a because this link is not significant ($\beta = -0.06$, $t = 0.70$). However, considering the isolated effect of sustainable HRM on work engagement in the linear regression, we find a positive and significant relation ($\beta = 0.36$, $p < 0.001$). Hypothesis 1b is supported because the link is significant, and the coefficient is positive ($\beta = 0.76$, $p < 0.001$). Thus, sustainable HRM has a significant and positive effect on work engagement, which in turn is positively and significantly associated with employee performance. When tested the relationship between sustainable HRM and employee performance (Hypothesis 1c), the results show that the link is non-

Table 3 Results of the Structural Model (n = 155)

<i>Dependent variable</i>	<i>Mediator variable</i>	<i>Independent variable</i>	<i>Hypotheses</i>	<i>Path coefficients</i>	Q^2	R^2
WE		SuHRM	H1a	-0.06	0.33	0.45
EP		WE	H1b.	0.76***	0.46	0.57
EP		SuHRM	H1c.	-0.307	0.07	0.09
ORS		SuHRM	H2a.	0.61***	0.31	0.37
OI		ORS	H2b.	0.84***	0.37	0.50
OI	ORS	SuHRM	H2c.	-0.27**	0.37	0.50
WE		OI	H3a.	0.48***	0.33	0.45
WE	OI	ORS	H3b.	0.27*	0.33	0.45

Notes: EP – Employee Performance; OI – Organizational Identification; ORS – Organizational Rationale for Sustainability; SuHRM – Sustainable HRM practices; WE – Work Engagement.

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$

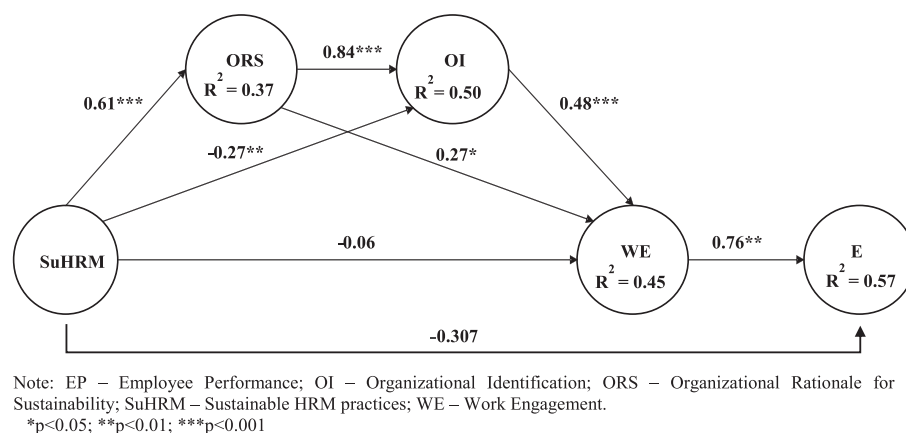


Figure 1 Structural Full Model Path Coefficients (Sample $n = 155$)

significant, and thus the ‘road’ between the two is not a direct one ($\beta = -0.307$, $t = 0.99$).

For the second set of hypotheses, the results show support for Hypotheses 2a and 2b. To test the mediating effects of an organizational rationale for sustainability (ORS), we followed Preacher and Hayes’ (2008) recommendations. The significance test was conducted by carrying out the bootstrapping procedure. Checking the path coefficients, we find that sustainable HRM has a significant and positive effect on the perceived ORS ($\beta = 0.61$, $p < 0.001$), which is in turn positively and significantly related to organizational identification ($\beta = 0.84$, $p < 0.001$). Thus, sustainable HRM indirectly influences organizational identification through the mediation of ORS. Hypothesis 2c is supported as well.

The results for the final set of hypotheses show that both Hypotheses 3a and 3b are supported. The coefficient path in the relation between organizational identification and work engagement is positive and significant ($\beta = 0.48$, $p < 0.001$). As previously reported, the perceived ORS has a significant and positive effect on organizational identification, which in turn is positively and significantly associated with work engagement. As a result, we find that the ORS indirectly influences work engagement through the mediation of organizational identification.

To sum up, the findings of this study are threefold: (1) sustainable HRM practices have a limited direct effect on work engagement; (2) the perceived organizational rationale for sustainability indirectly affects work engagement through organizational identification; and (3) sustainable HRM practices indirectly influence work engagement through a double-mediation effect from the perceived organizational rationale for sustainability and the organizational identification. These findings demonstrate that those HRM practices that are supportive of sustainability attitudes and behaviors influence work engagement – although this direct effect significantly

decreases when controlling for two mediators: organizational rationale for sustainability and organizational identification. As such, the perceived organizational rationale for sustainability should be congruent with the overall sustainability orientation of the organization in order to create stronger identification, and thus motivate employees to be more engaged. If employees believe that sustainability is not a priority of their organization, they may regard sustainable HRM practices as incongruent, and therefore identify less with their organization. For these reasons, our study contributes to the field of sustainable HRM by providing empirical evidence of a potential new concept: the role congruity of sustainability. Such evidence is the intricate set of mediating constructs in the relation between HRM sustainable practices and work engagement – the perceived organizational rationale for sustainability and organizational identification.

The limited direct effect that sustainable HRM practices have on work engagement indicates that the link between the employee’s selves and their work role (Kahn, 1990; May *et al.*, 2004) is probably not ‘completely closed’ when sustainable HRM practices are at stake, thus jeopardizing the performance-related outcomes, as the literature predicts (Shuck and Wollard, 2010). This notion of not being ‘completely closed’ might be due to a lack of alignment between the objectives of sustainable HRM practices and the characteristics and objectives of the job. The literature shows that when employees have significant and meaningful work, they tend to be more enthusiastic in developing pro-sustainability actions and practices; however, when they perceive that such practices are not aligned with the organization’s values, their willingness to feel engaged with the job reduces (Schaufeli and Bakker, 2004; Colvin and Boswell, 2007) and their performance becomes lower than it could potentially be (Bakker *et al.*, 2004; Schneider *et al.*, 2018). Therefore, the organization needs to use other tools

if it really intends to stimulate employees' work engagement and guarantee a positive impact from sustainable HRM practices, as the literature supports (Bakker and Demerouti, 2007, 2014; Jenkins and Delbridge, 2013).

The results of this study show that these tools might be the perceived organizational rationale for sustainability and organizational identification, thus supporting previous studies (Glavas and Godwin, 2013; Tosti-Kharas et al., 2017). In the light of the AMO theory, one can surmise that sustainable HRM practices, regardless of having an indirect impact on work engagement, contribute to the accomplishment of organizational goals in this area, as they enhance employees' ability, motivation, and opportunity to implement sustainable initiatives (Colvin and Boswell, 2007; Renwick et al., 2013; Buller and McEvoy, 2016). Based on the rationale of Ramus and Steger (2000), when employees perceive an alignment between the behavior and actions of those who are the 'face' of the organization and the goals announced by the organization itself, they are more prone to experience a sense of belonging in the organization. This sense will be greater or smaller, according to the degree of congruence between employees' own beliefs and the values portrayed by the organization. This sense of belonging is crucial when the organization tries to influence work engagement through sustainable HRM practices, as the results show that the double-mediation effect from the perceived organizational rationale for sustainability and organizational identification. By supporting this relationship, this study aggregates the concepts of Karanika-Murray et al. (2015) and Lamm et al. (2015).

Conclusion

The adoption of policies and practices that are able to effectively improve the three pillars of sustainability has become a key challenge to managers. This study aims to contribute to this challenge by examining the mediation role of the perceived organizational rationale of sustainability and organizational identification in the relation between sustainable HRM and work engagement. In doing so, it seeks to expand the growing field of research known as sustainable HRM. Our findings hold promise for understanding what we call the role congruity of sustainability. If an organization decides to implement sustainable HRM, it needs to communicate a strong overall sustainable image. Further, its employees need to perceive this rationale and to have higher levels of identification with the organization. Only in this manner can the organization benefit from its employees' engagement and performance. Therefore, sustainable HRM practices are important, but their effect on work

engagement might not be as direct as one would think. This study emphasizes the need to achieve congruity between the organizational rationale for sustainability and organizational identification to have a positive effect on work engagement. The strong relation between work engagement and employee performance found by this study strengthens the model we propose.

Implications for theory and management

In theoretical terms, this study contributes to the call for more research on the influence of sustainable HRM practices (Ehnert and Harry, 2012; De Prins et al., 2014; Ehnert et al., 2016). Specifically, it helps establish how sustainable HRM practices lead to work engagement and thus to an improvement in employee performance and its underlying mechanisms, as well as the importance of what we call the 'role congruity of sustainability'. In addition, this study also contributes to the research by offering an integrated measure of sustainable HRM, which is comprised of socially responsible HRM and green HRM practices. These complementary measures allow a more reliable assessment of sustainable HRM, providing a meaningful conceptual framework that shows how the different categories are interrelated and helps to integrate the findings from previous research to serve as a baseline to derive comprehensive theories of sustainable HRM.

Our findings have important implications for organizations and managers alike. Whereas most initiatives oriented toward sustainability occur at an organizational level, the findings of this study indicate that such initiatives might not be sufficient to increase engagement at work, which is always a key challenge for managers. Employees' perception of the organizational rationale for sustainability and identification with the organization must be congruent with what sustainable HRM puts forward. In such a way, understanding how employees perceive the role congruity of sustainability is crucial to enhancing the power of sustainable HRM practices. Given that employees develop their perceptions based on whether sustainability is a strategic priority for their organizations and how embedded it is in their organizational culture (Glavas and Godwin, 2013; Tosti-Kharas et al., 2017), leaders play an important role in shaping these employees' perceptions. As such, the results of this study may be used to formulate a leadership concept where sustainability orientation is a key competence for managers.

Furthermore, managers should pay attention to the design and implementation of HRM practices in their organizations, as this may have significant implications on employees' engagement, and, consequently, on their performance. Due to the importance of sustainability for organizational goals, HRM policies and practices should

address both the interests of internal and external stakeholders as a mechanism to create and reinforce strategic alignment. According to the results of this study, organizations need to adopt these comprehensive sustainable HRM policies and practices in order to reinforce their organizational identification and also to improve both employees' engagement and individual performance. The sustainable HRM practices identified in this study could be used to design jobs and workplaces which are more meaningful to the individual. Given that meaningful work entails boosting employees' identification and engagement (Cartwright and Holmes, 2006), sustainable HRM practices may help individuals develop a sense of self and of work itself, and a sense of balance in-between. One way of doing this is to incorporate principles such as diversity, equal opportunities, and respect for the environment and for all people, collaboration and mutual support, and promotion of wellness and well-being, just to name a few, when designing new job descriptions and workplaces. Therefore, designing workplaces that can support meaningful work through the use of sustainable HRM practices could reinforce strategic alignment and strengthen an employee's sense of organizational identity (Karanika-Murray *et al.*, 2015).

Limitations and future research

This study has some limitations, but they can be overcome in future research. First, the sample does not allow for the generalization of the results, due to its relatively small size and also on account of the fact that it was formed through a sample of convenience with a homogeneous group of respondents. On the subject of the sample, it should be noted that the questionnaire was not oriented towards employees of organizations which report to have sustainability strategies. Furthermore, the potential bias resulting from the fact that the sample is significantly comprised of large companies has been not controlled. Another general limitation, which results from the objectives of the study, is the use of sustainable HRM as an aggregate measure. Future research in this area should explore the impact of each sustainable HR practice on employee performance and contrast organizational settings that promote sustainable HRM practices and others that do not. It would be interesting to see whether less qualified workers would make a difference compared to the results in this study. In addition, testing our model within other national contexts might be meaningful. As suggested by Gooderham and Nordhaug (2011), HRM practices should be understood as a product of the external institutional environment of national culture, legislation, involvement, and unions as well as being a product of firm-level business and HRM' strategies. It would also be worthwhile to explore the impact of each practice of

sustainable HRM to check if some have greater effects on work engagement than others. Future efforts might also use data triangulation by collecting objective measures of sustainability performance. Finally, a longitudinal study would allow the exploration of the fluctuations on the perspectives about this topic.

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Conflict of interest

The authors declare that they have no conflict of interest.

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