

**SUSTAINABLE HUMAN RESOURCE MANAGEMENT AND JOB  
SATISFACTION— UNLOCKING THE POWER OF ORGANIZATIONAL  
IDENTIFICATION: A CROSS-CULTURAL PERSPECTIVE FROM 54 COUNTRIES**

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## ABSTRACT

Sustainable human resource management is gaining importance in organizations due to its role in developing a sustainable work environment and well-being. This paper discusses the relationship between employee perceptions of sustainable human resource management and job satisfaction in 54 countries. We propose that sustainable HRM is positively associated with job satisfaction but that this relationship is moderated by employees' identification with the organization and country-level individualism-collectivism. Thus, we suggest national culture functions as a second-level moderator of the relationship of sustainable HRM with organizational identification on job satisfaction. Findings from the multi-level analyses using data from 14,502 employees nested within 54 countries provided support for our hypotheses, namely that employee perceptions of sustainable HRM were positively associated with job satisfaction and that this relationship was more pronounced for employees with lower levels compared to higher levels of organizational identification in individualistic rather than collectivistic countries. These findings bear important implications for both theory and practice.

**Keywords:** sustainable HRM practices, organizational identification, job satisfaction, individualism-collectivism.

**Paper type:** Research paper

## 1 | INTRODUCTION

In recent years there has been a growing body of publications on sustainable human resource management (HRM) (e.g., Aust et al., 2020; Genari & Macke, 2022; Guerci et al., 2019; Järlström et al., 2018; Kramar, 2022; Podgorodnichenko et al., 2020; Ren et al., 2023; Stahl et al., 2020). This is largely attributable to the sustainable aspects of HRM becoming increasingly important for organizations given the increasing global awareness of sustainability (Campos-García et al., 2023; Lu et al., 2022). Sustainable HRM refers to “the adoption of HRM strategies and practices that enable the achievement of financial, social and ecological goals, with an impact inside and outside of the organization and over a long-term time horizon while controlling for unintended side effects and negative feedback” (Ehnert et al., 2016, p. 90). Sustainable HRM represents a concern for achieving both external (e.g., environmental protection) and internal (e.g., employee health) outcomes (Ehnert, 2009). Internally, sustainable HRM is gaining importance for organizations, with its role in fostering employee well-being (Qamar et al., 2023) never being more salient given the context of the Great Resignation (Klotz, 2022) and the need for meaningful work (Xu et al., 2023).

Among the many employee outcomes related to sustainable HRM, the most commonly identified are: organizational identification, turnover intentions (Garrido-Ruso and Aibar-Guzman, 2022; Paruzel et al., 2021), organizational trust (Wang et al., 2020), work engagement, job performance (e.g., Lu et al., 2023), and organizational commitment (Genari & Macke, 2023). Job satisfaction as an employee outcome of sustainable HRM (Qamar et al., 2023) deserves special attention. This is because job satisfaction is often used as an indicator of affective employee well-being (e.g., Peccei & Van De Voorde, 2019; Steel et al., 2018) and as it translates into an array of desirable job attitudes (e.g., engagement, organizational commitment) (Bowling et al., 2010) and behaviors (e.g., retentions) (Judge et al., 2001).

Although previous studies provide strong empirical support for the positive relationship of sustainable HRM with job satisfaction (Ahmad & Umrani, 2019; Cahyadi et al., 2022; Mariappanadar, 2020; Qamar et al., 2023), a research gap still remains to explain whether this relationship is universal or culturally dependent. As Diaz-Carrion *et al.* (2021, p. 3) state: “sustainable HRM systems are a reflection of the institutional pressures faced by firms since HRM is highly influenced by the context”. Thus, if the institutional and cultural context plays a significant role here, it can be expected that this relationship will vary between countries.

Even though most cross-cultural studies on job satisfaction indicate that both satisfaction levels differ between countries (e.g., Hauff et al, 2015; Sousa-Poza & Sousa-Poza, 2000), as well as the relationship between HRM, working conditions (e.g., Andreassi et al, 2014; Gu et al, 2022; Jang et al, 2018) or sustainable organization (Wang et al., 2020) and job satisfaction is culturally sensitive, there is some metanalysis which indicates that the relationship between sustainable organizational practices (e.g., Corporate Social Responsibility – CSR) and job satisfaction is culturally independent (e.g., Paruzel et al., 2021). In addition, there is no consensus on which dimensions of culture moderates the relationship between these variables. These ambiguous and inconclusive findings for relationship between sustainable and job satisfaction are due to previous studies only directly testing this relationship, without considering additional conditions under which this relationship is or is not significant. Thus, to better understand the relationship between sustainable HRM and job satisfaction across cultural contexts, we sought to identify the circumstances under which sustainable HRM is linked to job satisfaction.

In this study we draw on Social Exchange Theory (SET) (Blau, 1964) to examine the relationship between sustainable HRM and job satisfaction. Specifically, building on Social Identity Theory (SIT) (Tajfel & Turner, 1986), we propose one individual-level moderator (i.e., employees’ identification with the organization) and one country-level cultural

moderator (i.e., individualism-collectivism). In accordance with SIT, organizational identification forms a level to which individuals define themselves regarding their organizational membership (Tajfel & Turner 1986), with this shaping workplace attitudes and behavior (Haslam, 2004). We predict that organizational identification, as a culturally sensitive variable (Cooper & Thatcher, 2010), will moderate the relationship between sustainable HRM and job satisfaction. Organizational identification is included in the research model because of the well-documented claim that the specific bond an employee forms with their organization relates to how they perceive and respond to HRM practices (Weisman et al., 2023).

Additionally, cultural aspects related to specific job demands (Spector et al., 2007) and values determine which and how HRM policies and practices are implemented in companies. The HRM system is anchored in the culture of a given organization, and at the same time, in the national culture of a given country. Therefore, an important contextual factor for sustainable HRM research is not only the organization, but a country's national culture (Aycañ & Gelfand, 2012). While it is recognized that contextual factors influence the adoption and implementation of HRM policies and practices in different geographical regions, there remains a lack of understanding of their specific influence on sustainable HRM (Anlesinya & Susomrith, 2020). Therefore, in addition to the main link between sustainable HRM and job satisfaction moderated by organizational identification, we also conceptualized and tested the moderation effect of the cultural dimension of individualism-collectivism (Hofstede et al., 2010). Our choice of take into account only one cultural dimension (various authors list distinct dimensions of culture, see Taras et al., 2009) was made for the following reasons: 1) individualism-collectivism has received the most attention in HRM and organizational behavior research (Taras et al., 2010; Triandis, 1995; Tsui et al., 2007); 2) the related cross-cultural research on job satisfaction (e.g., Spector et al., 2007) and identification

and organizational practices (e.g., Farooq et al., 2017), identify this dimension as the most important correlate of employee job satisfaction (e.g., Gu et al., 2022).

A country's position on the scale of this dimension indicates how a given society finds a solution to a universal dilemma: how strong a person's connection to the group that is the source of his or her identification should be. Based on a plethora of previous studies on cultural differences in organizational identification (e.g., Guo, et al., 2018; Lee et al., 2015) and job satisfaction (e.g., Spector et al., 2007; Steel et al., 2018), we assume that patterns of relationship in individualistic/collectivist cultures moderate the impact of organizational identification on the sustainable HRM-job satisfaction relationship.

Our research makes three significant contributions to existing knowledge in the sustainable HRM field. First, we shed light on the complexity of the relationship between sustainable HRM and job satisfaction by considering the influence of organizational identification at the individual level. By incorporating the moderating role of organizational identification in our model, we provide insights into both main and interaction effects, offering new perspectives on the relationship between HRM and job satisfaction. Second, our study considers the cultural context when examining the relationship between sustainable HRM and job satisfaction. This contributes to understanding about the importance of organizational identification in the impact of sustainable HRM, highlighting differences across countries based on their level of individualism. Consequently, our research addresses a gap in the literature by systematically investigating when and how national culture moderates the effects of sustainable HRM on job satisfaction. In response to the call by Gelfang et al. (2017) for research to move beyond the question of whether culture matters, our study provides insights into how cultural context influences the relationship between sustainable HRM, organizational identification, and job satisfaction. This represents the first multilevel cross-cultural analysis of its kind, encompassing both organizational and individual variables,

and thus enables us to answer important research questions about whether sustainable HRM can create universal outcomes across different national contexts. Third, our research expands the knowledge base in the field of sustainable HRM by extending our investigation to 54 countries. This comprehensive approach aligns with the call by Anlesinya and Susomrith (2020) for a contextualized approach to sustainable HRM, broadening the scope of sustainable HRM research across five continents. As a result, our study contributes significantly to cross-cultural psychology and international human resource management. Overall, our research offers valuable insights by examining the influence of organizational identification, considering the cultural context, and extending the scope of investigation to a diverse range of countries. These contributions advance the field of sustainable HRM and enhance our understanding of the complex dynamics underlying the relationship between sustainable HRM and job satisfaction.

## **2 | THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

### **2.1 | Sustainable HRM and job satisfaction**

Sustainable HRM creates the skills, motivation, values and trust to achieve the triple bottom line, while ensuring the long-term health and sustainability of both the organization's internal and external stakeholders, with policies that reflect equity, development and well-being and help support environmentally friendly practices (Cohen et al., 2012). However, it is worth highlighting that the sustainable HRM literature does not represent a coherent body of work (Kramar, 2014), and evolution in approaches to its description translates into new definitions, types (Aust et al., 2020) and systematization of conceptualizations (Ren et al., 2023). In our article we consider two types of sustainable HRM, indicated by the Aust, Matthews and Muller-Camen (2020): socially responsible HRM and green HRM. Whereby we see sustainable HRM as encompassing green HRM, and these constructs are grouped together and termed sustainable HRM for the purposes of this paper. Moreover, we emphasize

the perspective indicating that sustainable HRM implies demonstrating responsibility in the different areas of HRM in a balanced way; that is, adopting a holistic approach to employee management to create organizational and human/social value (Diaz-Carrion et al., 2021). This involves integrating sustainability principles into HRM practices and policies, such as hiring and training programs, employee engagement initiatives, and flexible work arrangements, to improve organizational efficiency, performance, and well-being, while also reducing negative environmental impacts.

Recent research has established that sustainable HRM promotes many employee outcomes including job satisfaction (Cahyadi et al., 2022; Lu et al., 2023; Mariappanadar, 2020; Qamar et al., 2023; Paruzel et al., 2021; Wang et al., 2020). Job satisfaction is defined as “a function of the perceived relationship between what one wants from one’s job and what one perceives it as offering or entailing” (Locke, 1969, p. 316). As such, employees’ job satisfaction is determined by elements which change as a consequence of events which occur in the work environment. These events are, mostly, influenced by job characteristics or job requirements, as well as by the existing system of management practices in the company. Traditionally, job satisfaction has been valued as an important outcome of HRM (e.g., Andreassi et al., 2014; Den Hartog et al., 2013), with this relationship demonstrated in several meta-analyses (e.g., Jiang et al., 2012; Meijernik et al., 2021).

Social exchange theory (SET) provides the dominant theoretical framework explaining the influence HRM policies and practices have on employee work outcomes (Kehoe & Wright, 2013). Social exchange involves interdependent relationships in which there are unspecified two-way transactions based on normative principles of reciprocity (Cropanzano & Mitchell, 2005). In general, organizations provide “something of value” to the employee, who responds by providing “something of value” in return. When both parties in the relationship benefit, subsequent cycles of mutually beneficial exchange are likely to follow. Investments in

sustainable HRM practices are intended to signal an organization's willingness to engage employees in such social exchanges and establish trusting, long-term relationships. In turn, employee responses are likely to take the form of increased positive work-related outcomes (Mariappanadar, 2020). In particular, HRM enhances job satisfaction, whereby selective staffing and intensive training ensures employee-job fit; information sharing and job autonomy empowers employees; while performance-based pay supports the equitable distribution of rewards (Wu & Chaturvedi, 2009). Sustainable HRM, by meeting the needs of all stakeholders, supports the pursuit of social as well as economic goals (Diaz-Carrion et al., 2020). It is via the adoption of socially responsible values that positive employee attitudes, including job satisfaction, are stimulated (e.g., Cahyadi et al., 2022; Freire & Pieta, 2022). Specifically, sustainable recruitment and selection ensures that employees share the sustainability values of the organization (Abdelhamied et al., 2023), heightening job satisfaction. Training creates job satisfaction by establishing a bond between the employee and the organization and encouraging sustainable employee practices (Han et al., 2023) and behavior (Cho & Choi, 2021). Performance appraisal motivates employees to contribute more actively to the organization's sustainability goals (Abdelhamied et al., 2023) with this engagement in sustainable behavior being self-rewarding and leading to job satisfaction. Fair compensation is seen as an ideal job condition and thus promotes job satisfaction (Cho & Choi, 2021), and benefits that add a collective aspect to individual compensation facilitate cooperation between employees and the management, therefore increasing job satisfaction (Cho & Choi, 2021).

Importantly, when organizations are committed to sustainable HRM, employees perceive their work as meaningful because it has a broader scope that goes beyond focusing solely on the economic performance. This increases job satisfaction (Guerci et al., 2019).

In line with previous research that reports a link between sustainable HRM and job satisfaction, we propose the following hypothesis:

***Hypothesis 1.** Sustainable HRM is positively related to job satisfaction.*

## **2.2 | The moderating role of organizational identification**

While sustainable HRM offers individuals different HRM functions to enhance their job satisfaction, an employee's willingness to respond positively to those practices can depend on other variables. One such variable that we consider plays an important role and have therefore chosen to examine is the employee's organization identification (Ashforth et al., 2008; Lee et al., 2015; Weisman et al., 2023).

According to SIT, there is an important distinction between being a member of a group and identifying with that group (Tajfel & Turner, 1986). Thus, if employees have different levels of identification with the organization, the way they perceive and react to the practices implemented in the organization will be different (Weisman et al., 2023). In general, organizational identification can be defined as "the perception of oneness with or belongingness to an organization" (Mael & Ashforth, 1992, p. 104). Organizational identification constitutes one of the key factors explaining the dynamic willingness of individuals to make sacrifices for the organization (Ashforth & Schinoff, 2016). Based on SIT (Tajfel & Turner, 1986) it is surmised that employees with a high level of identification with a group or organization define themselves in terms of that group's characteristics (Haslam, 2004). In doing so, members share the group's prototypical traits, thereby transforming the personal "I" to an organizational "We" (van Knippenberg & Sleebos, 2006). Moreover, this "psychological merging" of self and group suggests that individuals who strongly identify will care more deeply about the group's welfare, evaluate fellow members favorably, and view them as trustworthy given their perceived similarity and common bond (Haslam, 2004; Tajfel & Turner, 1986).

Identification not only results from a sense of belonging to a particular organization or from sharing group values and norms but can be stimulated both by leaders and/or intra-organizational practices (Weisman et al., 2023) through the processes of organizational sensemaking and sense-giving (Ashforth & Schinoff, 2016). Recent research shows that sustainable HRM shapes employee identification (e.g., Freire & Pieta, 2022; Liao et al., 2022) by developing personal goals and/or helping employees to find meaning in their work (Pratt et al., 2013). Previous research, including meta-analyses (Lee et al., 2015; Ricketta, 2005; Steffens et al., 2017) unequivocally shows that individuals with high levels of organizational identification display more positive attitudes and behaviors toward the organization. However, it is important to explain not only how but also when employees with a high vs. low sense of identification respond to sustainable HRM practices.

There are multiple explanations for the moderating role of organizational identification in the relationship between sustainable HRM practices and job satisfaction. The first assumes that high organizational identification may strengthen the relationship between these variables. Employees with a high level of organizational identification may be more inclined to appreciate and utilize sustainable HRM practices (e.g., development opportunities, work-life balance, fair compensation, etc.) leading to increased job satisfaction. This may be because a high sense of organizational identity and positive self-concept allows employees a greater benefit from the organization's functioning practices (Setterlund & Niedenthal, 1993).

The second explanation assumes that the relationship may be weakened because when employees already have high identification with the organization, satisfaction is already likely to be high, attenuating the role of sustainable HRM practices in enhancing employees' job satisfaction (Mostafa et al., 2019; Wang et al., 2017). Employees are willing to adjust themselves to fit into the organization when they view themselves as members (Ashforth & Schinoff, 2016; Haslam, 2004). Their identification then is not the result of situated

identification but deep structure identification (Ricketta et al., 2006). Therefore, they are intrinsically motivated to behave in line with organizational goals and norms and thus, have a lower need for guidance and signaling from the sustainable HRM system. When employees identify with the organization, they derive intrinsic motivation from their identity, and because the extrinsic motivation emanating from HRM practices becomes less salient to them, they consequently pay the practices less attention. Indeed, van Dick et al. (2004) contend that the motivational forces derived from the social identity the organization provides should encourage highly identified employees to act in group-beneficial ways. Thus, they do not need additional motivation from the organizational system to increase their overall job satisfaction. Rather, because social identity is an important determinant of self-esteem (Haslam, 2004; van Dick et al., 2004), they benefit from “where they are” and “with whom they are” in their professional environment. Previous research supports this claim. Studies show that the effect of leadership on employee functioning is stronger when employees have lower levels of identification with the organization (Wang et al., 2017). Mostafa et al. (2019) also found that while employees with higher levels of identification showed lower intention to leave and higher levels of citizenship behavior, they responded less positively to high-commitment HRM practices than employees with lower levels of identification. In other words, both leadership and HRM practices have a stronger positive effect on those with lower levels of organizational identification. This is because those with lower levels of identification have more trouble finding meaning at work (Pratt et al., 2013) and look for it not so specifically in their cognitive and emotional bond with the organization, but in the perceived instrumentality of HRM practices.

Based on this, we find the second explanation to be more likely and propose that sustainable HRM will have a weaker (vs. stronger) relationship with employees’ job

satisfaction when they have higher (vs. lower) organizational identification. Thus, we hypothesize that:

***Hypothesis 2.** Organizational identification moderates the relationship between sustainable HRM and job satisfaction such that the relationship is stronger when organizational identification is low rather than high*

### **2.3 | The moderating role of the cultural dimension of individualism – collectivism**

Although many studies explain an overall relationship between sustainable HRM and job satisfaction (e.g. Qamar et al., 2023), the role of cultural context in this relationship has been largely ignored. This is problematic given prior research shows that cultural aspects shape the work context and employee perceptions of work (e.g., Spector et al., 2007) as well as satisfaction specifically (e.g., Steel et al., 2018).

For the aims of our research, the issue is not whether culture is relevant to the relationships under study, but when and how it matters (Gelfang et al., 2017). In the current study, the individualism-collectivism of the country is considered as a potential moderator of how organizational identification affects the relationship between sustainable HRM and job satisfaction. Considering individualism-collectivism at the country level, it is assumed that certain beliefs and values are shared by people living in a given country (Tsui et al., 2007). Of course, this approach does not exclude intra-cultural variations in individualism-collectivism. Rather, it presumes that nations differ in the average level of this orientation, which is related to the existence of related cultural norms and expectations. Individualism-collectivism is perhaps the most distinguishing cultural characteristic in terms of how various societies analyze and process social behaviors (Hofstede et al., 2010; Leung et al., 2005; Triandis, 1995) and as such it is most relevant to organizational identification (Cooper & Thatcher, 2010; Guo et al., 2018; Lee et al., 2015).

Despite many criticisms of the distinction of this dimension of culture (e.g., Voronov and

Singer, 2002) is most often treated as a distinction that are based on the concept of self-construal that considers the degree of fundamental relatedness of individuals to one another (Markus and Kitayama, 2003; Triandis, 1995). Cultural values of individualism and collectivism differ in their relative emphasis on independence versus interdependence with a group (Markus & Kitayama, 1991). In individualistic cultures (more common in North America and Western Europe) employees focus on personal achievement and independence, use individual work methods and prefer working by themselves instead of in groups (Hofstede et al., 2010). Moreover, in such countries the values of pleasure and positive affect are important personal values which people seek to maximize (Sims et al., 2015). Wang et al. (2004) argued that individualists tend to focus on their own needs. As a consequence, they are likely to respond more strongly to work that is consistent with those needs. Employees in individualistic countries tend to calculate their investment in and return from the relationship with the organization (Fischer et al., 2009). However, Steel and Taras (2010) argue that individualism at the national level is largely attributable to a country's wealth and this may partly explain why individualistic countries report statistically higher levels of job satisfaction (Steel et al., 2018).

In contrast, in collectivistic cultures (more common in East Asia), the welfare of a group, its harmony, and cohesion are placed above personal concerns. People who view the self as inherently interdependent with the group to which it belongs tend to adhere more to group norms than do those from individualistic cultures (Leung et al., 2005).

Study by Hauff, Richter and Tressin (2015) using a multilevel approach found that the impacts of some job characteristics vary significantly between countries, while others prove to be independent of national context. In turn, Jang et al (2018) and Gu et al., (2022) on the basis of an analysis of the moderating role of culture in the relationship between job characteristics and job satisfaction, found some differences. Of course, having an interesting

job is a universal determinant of job satisfaction (Hauff et al., 2015; Sousa-Poza & Sousa-Poza, 2000) but, in examining the latter relationship, this finding is not surprising given the high importance attributed to the fulfillment of needs, or more broadly the self-fulfillment of individuals in individualistic cultures (Hofstede et al., 2010). Therefore, sustainable HRM practices with their employee-centred orientation can be expected to translate into employee satisfaction in countries with higher scores on individualism.

This assumption, based on previous analyses of national culture in the context of HRM and job characteristics, is supplemented by another element included in our model – organizational identification. In our view, the lack of a strong bond with the organization can trigger transactional forms of relationships. In this case, HRM practices offering certain benefits to employees may contribute to positive attitudes towards the organization (Aryee et al., 2002; Jia et al., 2019) – including satisfaction and reinforcing the intention to remain in the organization, as shown in prior research (Gould-Williams & Davis, 2005). Additionally, the positive effects of HRM in strengthening satisfaction at low levels of identification may, in this case, also be due to sustainable HRM considering employees as an important organizational stakeholder and explicitly targeted at meeting employees' needs and interests (Richards, 2022).

To sum up, sustainable HRM constitutes a strong signal for the employee, indicating that the organization cares about them and provides a place where they can develop. These values are particularly salient where employees come from cultures with a high level of individualism because they have potential to enhance job satisfaction and positively impact organizational identification. This is because such individuals do not possess strong group attachments and are less concerned about the image of the organization. Instead, those high in individualism place emphasis on personal interests and the attainment of personal goals (Moorman & Blakely, 1995). Consequently, they are thought to be particularly sensitive to personal status and the

fulfillment of personal needs (Fuller et al., 2006), and as such, these characteristics are thought to be more central to their job satisfaction. Research by Farooq, Rupp and Farooq (2017) confirms this assertion, demonstrating that cultural individualism moderates the relationship between internal sustainable HRM and organization identification. This argument informs our third hypothesis:

***Hypothesis 3.*** *The cultural dimension of individualism-collectivism moderates the moderating role of organizational identification in the relationship between sustainable HRM and job satisfaction in such a way that the relationship between sustainable HRM and satisfaction is stronger with higher levels of individualism when organizational identification is low.*

Based on the above argumentation, we propose a theoretical model linking sustainable HRM with job satisfaction, with this relationship moderated by employees' organizational identification and the national cultural differences in individualism-collectivism. Figure 1 presents the relationships conceptualized in this study.

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### **3 | METHODOLOGY**

#### **3.1 | Sampling and research procedure**

Due to the cross-cultural nature of the research we tried to ensure that the number of countries in the research sample was as large as possible. Our main selection criterion was the Sustainable Development Goals (SDGs) Index Score 2022 (Sachs et al., 2022). It contains both information on the level of countries' achievement of the SDGs, as well as detailed indicators, ecological, social, institutional and economic, for countries. These indicators, along with the position of countries in achieving the SDGs, are useful for comparisons at the individual level. Guided by data contained in the SDGs Index Score 2022, we sent invitations

to academic institutions, and individual researchers working on sustainability, HRM, and organizational behavior issues from over 120 countries. In selecting countries, we were focused on ensuring representativeness in terms of regional (6 continents), economic (highly developed and developing countries), level of SDGs achievement (countries at different levels of achievement of SDGs goals) and cultural diversity. We received responses to the invitation from 43 country teams. As a result, we were able to confirm participation from teams of researchers from 54 countries.

The final sample consisted of 14,502 working adults from 54 countries: Australia, Belgium, Brazil, Bulgaria, Canada, China, Chile, Colombia, Croatia, Czech Republic, Denmark, Ecuador, Egypt, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Lithuania, Malta, Mexico, Netherlands, Nepal, New Zealand, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Serbia, Slovak Republic, South Africa, Spain, Sri Lanka, Suriname, Switzerland, Thailand, Turkey, Ukraine, United Arab Emirates, Uruguay, USA, UK. Data were collected in 2022 as part of a project entitled *Sustainable Human Resource Management Cross-Cultural Empirical Study* by 110 researchers from different research centers located in each country. The different teams collected data using printed questionnaires and cloud-based surveys (e.g., MS Forms, Google, etc.). Survey participants were recruited from small, medium and large organizations where HRM practices are developed and implemented. In collecting these data, efforts were made to achieve a gender-balanced sample.

In this study, 55% of respondents were female. Among the respondents, 48% worked in large companies (251– 1,000 employees), 28% worked in medium-size firms (51–250 employees) and 24% worked in small-size firms (10–49 employees). Most were university-educated individuals (78%). 34% aged between 25–34, 24% between 25–34 years age group. All respondents worked full-time and had been in their current position for at least 6 months.

Some 34% had 1-5 years tenure, with 19% having 6-10 years tenure and 33% being in their current position for 10 years or more. Around one-third of our sample of respondents held a managerial position.

### **3.2 | Measurements**

The study used questionnaires originally designed and validated in English. Original versions were used in English-speaking countries, while the same adaptation procedure was used in other countries. Following the recommendations of International Test Commission Guidelines for Translating and Adapting Tests (International Test Commission, 2017), English-language versions were translated into national languages and then the back-translation procedure was applied.

All measures used 5-point response scales, with the response options ranging from 1 = strongly disagree/never/not at all to 5 = strongly agree/always/extremely. All scale reliabilities (Cronbach's  $\alpha$  values) exceeded 0.7 and were thus deemed to be acceptable (see Appendix 1 for full details).

***Sustainable HRM***, defined as “the adoption of HRM strategies and practices that enable the achievement of financial, social, and ecological goals, with an impact inside and outside of the organization and over a long-term time horizon while controlling for unintended side effects and negative feedback” (Ehnert et al., 2016, p. 90), was measured with the 15-item tool diagnosing various practices relating to green, and socially responsible company activity. Twelve items were drawn from Diaz-Carrion *et al.* (2018) sustainable HRM diagnostic tool and addressed specific practice areas including: staffing, training, performance evaluation and career management, compensation, work-family balance and diversity promotion, occupational health and safety. Three items were drawn from Dumont, Shen and Deng (2017) and addressed green human resources management practices.

**Organizational identification**, defined as “the perception of oneness with or belongingness to an organization” (Mael and Ashforth, 1992, p. 104), was assessed with the 6-item scale developed by Mael and Ashforth (1992).

**Job satisfaction (JS)**, defined as “a function of the perceived relationship between what one wants from one’s job and what one perceives it as offering or entailing” (Locke, 1969, p. 316), was measured with the 3-item tool called *Michigan Organisational Assessment Questionnaire – Job Satisfaction Subscale* (Cammann et al., 1983).

**Individualistic-collectivistic culture**, describes distinction on the concept of self-construal that considers the degree of fundamental relatedness of individuals to one another (Hofstede et al., 2010), was assessed using Hofstede’s cultural indicators (Hofstede et al., 2010) based on Culture Compass™ tool (<https://www.hofstede-insights.com/country-comparison/>). The assessment is made using a standardized tool that determines the placement of a cultural dimension on a collectivism- individualism continuum on a scale of 0-100. The more points assigned to a country, the more individualistic its culture. We decided to use Hofstede’s cultural indicators because of the ubiquity of the tool’s use in previous cross-cultural studies (Taras et al., 2012) and, most importantly, the availability of data for all countries in the sample. In addition, other studies on cross-cultural comparisons for job satisfaction (Gu et al., 2022; Hauff et al., 2015) have used Hofstede's model, allowing us to compare our results with previous studies.

**Control variables.** Given the multilevel nature of the study, we used controls at both the employee level and the country level. At the country-level, we controlled for economic strength by *Gross National Income (GNI)*. GNI comprises the total value of goods and services produced in a country, together with its income received from other countries minus payments made to other countries. We took the per capita GNI data in US\$ for 2021 for each country from the database of the World Bank

(<https://data.worldbank.org/indicator/NY.GNP.PCAP.CD>). Previous studies have found that GNI are highly correlated with cultural individualism (e.g., Hofstede et al., 2010; Steel et al., 2017), and related to employee outcomes (Fisher & Mansel, 2009). Moreover, Peretz and Rosenblatt (2011) suggested that economic strength may impact a country's propensity to invest in HRM practices and have an influence on job satisfaction.

At the employee level, we controlled for: years of education, age, and seniority. The selection of these control variables was guided by previous studies (e.g., Riketta, 2005).

### **3.3 | Analytical strategy**

The first step of the analysis process focused on the aggregation of the data to the country level to allow testing for multilevel moderation analysis, that is, the moderating role of country-level individualism/collectivism in sustainable HRM x organizational identification – job satisfaction relationship.

Then, we carried out Confirmatory Factor Analysis (CFA) using AMOS software (version 28) to estimate the fit indexes for each focal construct and evaluate the measurement model ( $\chi^2$  – chi-square test, RMSEA – Root Mean Square Error of Approximation, CFI – Comparative Fit Index, TLI – Tucker Lewis Index, SRMR – Standardized Root Mean Square Residual) (Kline, 2016). The following criteria for adequate model fit were adopted: CFI and TLI > .95 and SRMR and RMSEA < .08 (Kline, 2016). Maximum likelihood estimation methods were used and the input for each analysis was the covariance matrix of the items or the scale-scores.

Next, following the recommendations made by Aguinis et al. (2013), we built the model which consisted of six steps of analyses, that is, the null model (Step 1), a random intercept and fixed slope model (Step 2 and 3), a random intercept and slope model (Step 4), and a cross-level interaction model (Step 5 and 6).

We used cluster-mean centering recommended in multilevel interaction analyses (Enders

& Tofighi, 2007; McNeish & Kelley, 2018). This centering method, in contrast to grand mean centering, yields the most accurate estimates of within-group slopes and minimizes the possibility of finding spurious cross-level interaction effects. We utilized SPSS version 28 to carry out the descriptive statistics and inter-correlations. We used AMOS version 28 to estimate the CFA for each construct and we used Jamovi version 2.3 to test our hypotheses.

**4 | RESULTS**

**4.1 | Measurement models**

The measurement model was assessed through CFA, which comprised three latent variables. The values of fit indices (Table 1) showed that the baseline three-factor model showed the best fit to the data.

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**4.2 | Descriptive statistics**

A total of 54 samples from different countries were included in this study (detailed characteristics of the sample are provided in Appendix 2).

The results from the inter-correlations and descriptive statistics are presented in Table 2. The results showed that job satisfaction was positively and significantly related to both sustainable HRM ( $r = .425, p < .01$ ) and organizational identification ( $r = .485, p < .01$ ) and there was a lack of a correlation with the individualistic-collectivistic culture dimension ( $r = -.013, p = .112$ ).

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### 4.3 | Hypotheses testing<sup>1</sup>

Due to the nested nature of the data, it is possible that both the intercept and slope vary across countries. Specifically, it is likely that country differences in average employee job satisfaction and perception of sustainable HRM practices levels may relate differently to job satisfaction across countries.

In Step 1 of our analysis, we computed the intraclass correlation (ICC), which quantifies the proportion of the total variation in employee job satisfaction accounted for by country characteristics. A value near zero (ICC ranges from 0 to 1) suggests that a model including Level 1 (L1) variables only is appropriate, and, hence, there may be no need to use multilevel modeling. Instead, a simpler OLS regression approach may be more parsimonious. Peugh (2010) concluded that ICC values in multilevel analysis typically range from .05 to .20. So even a small ICC suggests that there may be a Level 2 (L2) variable (country differences) that explains heterogeneity of job satisfaction scores across countries.

Results included in Table 3 indicate that  $ICC = .055$  (step 1), which means that differences across countries account for about 5.5% of the variability in individuals' job satisfaction levels. As shown in Table 3, the across-countries variance in job satisfaction is  $\tau_{00} = .047$  and the within-team variance is .805. In short, the results provide evidence of a nested data structure that allows for a multi-level analytical approach.

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<sup>1</sup> To make sure our inference was correct we conducted additional robustness analyses using a different approach to studying national culture – the GLOBE model. The results of additional analyses are provided in Appendix 3.

Next, in Step 2 of our analysis, we assessed the possible presence of a cross-level direct effect of individualism-collectivism on job satisfaction. Obtained results indicate that the predicted slope regressing sustainable HRM on job satisfaction is  $\gamma_{10} = .324; p < .01$ . Moreover, results showed that after controlling for GNI (at L2), the individualistic-collectivistic culture dimension did not explain variance in countries' average job satisfaction. However, in the absence of controlling for the GNI variable at the L2 level, the relationship of the individualism-collectivism culture dimension with job satisfaction was statistically significant ( $\gamma_{01} = .003; p < .05$ ) which suggests that in countries with higher levels of individualism, employees have higher levels of job satisfaction. However, this conclusion would be misleading as it ignores the role of countries' economic strength which can explain differences in job satisfaction between countries.

In general, our results provide evidence in support of a direct single-level effect of sustainable HRM practices and organizational identification on employee job satisfaction. Thus, Hypothesis 1 was supported.

In Step 3 of our analysis, while controlling for the same parameters, we also included the sustainable HRM x organizational identification interaction term to explain variance in employee job satisfaction as per Hypothesis 2. Table 3 shows that the slope regressing sustainable HRM on job satisfaction was  $\gamma_{10} = .324; p < .01$ , and the interaction sustainable HRM x organizational identification on job satisfaction is  $\gamma_{30} = -.060; p < .01$ . The results indicate that for those employees with lower levels of organizational identification, sustainable HRM leads to greater gains in overall job satisfaction<sup>2</sup>.

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<sup>2</sup> Due to the recommendations of an anonymous reviewer, we conducted additional analyses to compare the tested effects by gender. The results are provided in Appendix 4. The new analyses showed some differences between groups. Most importantly, the relationship between sustainable HRM and job satisfaction is stronger for women in situations when they possess greater identification with the organization. For men, this moderation was negative. That is, those with lower levels of identification with the organization benefit more from the impact of sustainable HRM practices ( $z\text{-score} = -3.367; p < .01$ ).

Following Aiken and West's (1991) procedure, we computed the regression slopes when scores on organizational identification (moderator) were one standard deviation (SD) above and below the mean. The positive relationship between sustainable HRM and job satisfaction was weaker for individuals with higher levels of organizational identification (+1 SD:  $\beta = .269, p < .01$ ) than employees with lower levels of organizational identification (-1 SD:  $\beta = .379, p < .01$ ). Thus, Hypothesis 2 was supported. Figure 2 shows a graphical representation of the two-way interaction between the tested variables.

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In Step 4 of our analysis, we assessed the relationship between sustainable HRM and job satisfaction across countries. For this purpose, we used  $-2 \log$  likelihood ratio model with a random slope component and a model without a random slope component (Bliese, 2002). Obtained result showed that the variance in slopes across groups was  $\tau_{11} = .008$ . Also, results shown in Table 3 indicated that, based on FIML, the model in Step 4 fitted the data better than model in Step 3.

In Step 5 of our analysis, we tested the cross-level interaction effect – that is, sustainable HRM x individualistic-collectivistic culture dimension. The slope of sustainable HRM on job satisfaction is expected to equal  $\gamma_{10} = .327; p < .01$ , and interaction sustainable HRM x organizational identification on job satisfaction is  $\gamma_{30} = -.062; p < .01$  for countries with an average individualistic-collectivistic culture.

Finally, in Step 6 our analysis, we tested the cross-level three-way interaction effect between sustainable HRM x organizational identification x individualistic-collectivistic culture dimension. As per Hypothesis 3, we stated that, in the presence of sustainable HRM,

individuals with lower levels of identification with the organization (one standard deviation below the mean) will have higher levels of job satisfaction in individualistic, compared to collectivistic cultures. Unstandardized results showed that the relationship of sustainable HRM x organizational identification with job satisfaction became stronger, by  $\gamma_{12} = .002$ ;  $p < .01$  units, as countries' culture increased by one unit in individualism. After standardizing the regression coefficients, we obtained a value parameter of  $\gamma_{12} = .066$ ; ( $C.R. = 7.824$ ;  $p < .01$ ; *Cohen's d* = .2132). In other words, the results showed that sustainable HRM x organizational identification has small but significant effects and increased the level of job satisfaction more strongly in the individualistic (+1SD) than in collectivistic cultures (-1SD). Figure 2 shows a graphical representation of the three-way interaction between the tested variables.

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## 5 | DISCUSSION

Shifting the focus from HRM's role in promoting organizational sustainability to sustainable human resource development (Ren et al., 2023) emphasizes non-economic goals and an employee-centered approach. Thus, this study focuses on the relationship between sustainable HRM practices and job satisfaction with consideration of the cultural context. In doing so, our study contributes to the international HRM research by identifying how national context might impact the ability of sustainable HRM to create employee-related outcomes and how to implement sustainable HRM in different countries, industries, for a variety of stakeholders; all of which is crucial to building sustainable societies through human-centred HRM (Cooke et al., 2022). In our research, we focus on sustainable HRM because of its strong employee orientation and concern for employee well-being.

The research and analysis presented in this article allowed us to formulate an answer to an important question asked by researchers (Gelfang et al., 2017) about whether the sustainable HRM, organizational identification and job satisfaction relationship describes a general mechanism independent of cultural context, or whether cultural context modifies how sustainable HRM affects employees. Given our study's use of a sample comprising 54 countries from 6 continents, representing countries with different levels of achievement of the SDG goals, different levels of economic development, affiliated with different international organizations (e.g., European Union, OECD, MERCOSUR, ASEAN, etc.), with different cultural patterns and different institutional rules relating to the functioning of the organization, our results have universal qualities and allow for the generalization of conclusions. Thereby our research makes an important contribution to the existing knowledge in the area under discussion.

### **5.1 | Theoretical implications**

Based on SET our study confirms the relationship between sustainable HRM and job satisfaction. This is consistent with previous research (Ahmad & Umrani, 2019; Lu et al., 2023; Qamar et al., 2023). The relationship with job satisfaction can be explained based on the rules of reciprocity and fairness. It results from the perception of the proportionality between the contributions of employees (commitment, performance, etc.) and the actions taken by the organization (e.g., staffing, training, performance evaluation and career management, compensation, work-life balance and diversity promotion, and occupational health and safety, as well as pro-environmental focus). Rules of reciprocity and perceived fairness are therefore universal in nature and have an impact on employees regardless of cultural context (Cropanzano & Mitchell, 2005). Thus, it can be concluded that sustainable HRM might directly translates into employee satisfaction in the countries under study.

Moreover, the study highlights the complex contingencies that influence the relationship between sustainable HRM and job satisfaction. We predicted that the influence of sustainable HRM on outcomes is dependent not only on mutual exchange but also on identity of the employees. Informed by SIT, we additionally evaluated the sustainable HRM and organizational identification interaction for explaining employee job satisfaction. Thus, going beyond the typical vision of organizational identification as a mediator of the relationship between HRM and satisfaction, our research shows that while sustainable HRM has a positive impact on employees' job satisfaction, the degree to which sustainable HRM results in positive outcomes depends upon employees' organizational identification. On the basis of this analysis, we identified two important effects. First, employees with lower levels of organizational identification respond more strongly to the sustainable HRM than employees with high identification with their organization. We surmise that, when employees identify with their organization, they derive intrinsic motivation from this identity, with the extrinsic motivation coming from HRM practices being less important to them. It would seem that in people with strong identification, jointly perceiving and defining themselves as "we" triggers better well-being and a more positive evaluation of the work environment due to normative and moral standards (Ashforth et al., 2008; Haslam, 2004). In addition, analyses conducted by gender indicate differences between men and women. For females, greater identification with the organization leads to a stronger link between sustainable HRM and job satisfaction. Females who possessed generally stronger communal orientation (Fritz & van Knippenberg, 2017) are more engaged with the organization. Therefore, they may be more likely to exploit sustainable HRM practices for their purposes, leading to greater job satisfaction (Mascarenhas et al., 2022).

Moreover, we look for explanations for this interesting effect in contextual factors. At a general level, such a factor is national culture. We find that the effect of sustainable HRM on

job satisfaction with the moderating power of identification is universal (context-independent), with the strength of the effect contingent on the cultural factor. In our study, this is the cultural dimension of individualism-collectivism (Hofstede et al., 2010). We established that employees with lower levels of identification who come from countries with high levels of individualism respond more strongly to sustainable HRM. We explain this effect by the fact that employees from cultures that are high in individualism value the achievement of personal goals and interests more highly (Hofstede et al., 2010). This determines cultural patterns of the relationship with the organization in a more transactional direction (based on reciprocity). Employees who identify less with the organization expect an adequate ‘exchange’, and their job satisfaction and positive attitudes towards the organization may be the result of their expectations being met. These results confirm findings from other studies that state that employees’ reactions to HRM practices are dependent on their perceptions of HRM practices (Hauret et al., 2022). In our study, organizational identification has a contextually sensitive impact that can change over time, and the strength of the context can be an effect of the bundle of sustainable HRM impacts, as has been shown in research investigating the relationship between HRM and satisfaction (Hauret et al., 2022).

Second, an analysis of the sustainable HRM and job satisfaction relationship considering a cross-cultural perspective fills an important gap in understanding the boundary conditions and allows us to explain the variability of satisfaction in the countries differing due to individualism vs. collectivism. Individualism makes organizational identification a stronger condition in the sustainable HRM–job satisfaction relationship. Arguably, this is because organizational identification is a rarer feature of individualistic cultures, and so when it is present it has more potential to strengthen the effects of organizational identification on the sustainable HRM–job satisfaction relationship. In collectivist cultures, organizational identification is a given, therefore its effects are not so salient.

Previous research has reported two different perspectives – 1) stating that HRM practices and job satisfaction are not much differ across countries if it consider socio-economic and institutional aspects and seem to be low culture-sensitive (e.g., Huang & van de Vliert, 2003; Steel et al., 2018), and 2) stating that national culture differentiates the level of job satisfaction (Gu et al., 2022; Jang et al., 2018). The results of our study support findings from the latter group indicating that, in individualistic countries, having an exciting job contributes more strongly to satisfaction than in the collectivistic ones (Gu et al., 2022) along with the ability to balance one’s work and personal life (Andreassi et al., 2014). However, this is only if we include the culturally sensitive factor of organizational identification in the study (Lee et al., 2015). Previous research omitted this dimension and, therefore, it has not been able to conclusively answer the question of whether the sustainable HRM and job satisfaction relationship describes a general mechanism independent of cultural context, or whether it is culturally dependent. Thus, we believe there are culturally sensitive elements in the ‘black box’ model (HRM as input and job satisfaction as output), such as patterns of social relations, ways of distributing resources, etc., which should be taken into account in cross-cultural research on HRM practices.

The analysis of such factors should be the subject of further in-depth analyses, especially in the face of inconsistencies in the research described by Judge et al. (2002, p. 38) reporting differences in effects at the country level: “...studies comparing countries or sample of workers across countries found individualism to have a positive link with satisfaction, while studies within a country found collectivism to have a positive relationship with job satisfaction. ... We think that within the Asian warm collectivistic countries’ collectivism is positively linked to job satisfaction, but at the between country level (including both individualistic and collectivistic countries, cold and warm, respectively) the individualistic-job satisfaction positive link holds”.

Although our study provides a deeper understanding of and new insights into the variability of effects at the level of cultural factors, it is important to recognize that the study of national cultural values is not sufficient, as people are influenced by different cultures and their identification with each culture (e.g., workgroup culture, organizational culture, national culture and regional culture) (Andreassi et al., 2014). Moreover, corporate practices and culture can reduce the influence of national cultures. On the other hand, institutional aspects embedded in a country's culture can determine the implementation of sustainable HRM. It might differ across countries, as stressed Diaz-Carrion, López-Fernández and Romero-Fernandez (2021).

## **5.2 | Practical implications**

Based on these findings, it is possible to formulate several practical implications for managers and employers, especially from multinational companies. Results show that sustainable HRM and organizational identification increase the level of job satisfaction more strongly in the individualist than in collectivist cultures. This does not mean, of course, that sustainable HRM activities should only be targeted at employees from countries with high levels of individualism; as our study showed that the impact is universal, independent of context. What is different, however, is the adaptation of certain practices to a specific socio-cultural environment, as discussed by Aycan et al. (2000) and the differentiation of practices due to individualism-collectivism (Konsky et al., 2000). Managers, therefore, must adjust their activities to individuals, taking into account the diversity of their cultural value preferences, which determine patterns of functioning and response in the workplace. This is a major challenge given the growing demands of a globalized business environment (Aycan et al., 2000). However, in countries with a higher degree of individualism, it is important that while designing and implementing sustainable practices simultaneously fulfill the

individualized needs of employees, as well as cultivating group identity, therefore strengthens employee satisfaction (Weisman et al., 2023).

An important conclusion from our research is that sustainable HRM is a strong universal tool that can be used in the process of strengthening employee satisfaction in companies. Importantly, sustainable HRM activities are stronger with lower levels of organizational identification (this applies especially to males). It means that organizational identification can buffer the negative consequences of the absence of sustainable HRM practices on job satisfaction. This suggests that the sense of connection that an employee has with the organization can serve as an important factor that translates into many desirable attitudes and behaviors at work. Therefore, our study allows us to formulate two important implications for employee management. First, sustainable HRM can effectively increase satisfaction even in employees who do not have a strong bond with the organization. Thus, organizations should implement diverse sustainable practices, such as sustainable training and development, voicing mechanisms, fair career mechanisms, or work-life balance policies, to promote job satisfaction. On the other hand, research shows the important role in strengthening organizational identification of organizational context: HRM practices (Weisman et al., 2023) and leadership (Mayfield et al., 2021). Strengthening identification will later translate into other positive outcomes, including job performance (Lee et al., 2015). Considering the social aspect of creating the organizational identification, it is also worth utilizing social relations. In this case, cultural aspects, as expressed in social and identity values, as well as the specific corporate culture that influences relationship patterns and cultivating strong bonds and relationships with other employees, may be crucial.

### **5.3 | Limitations and future research**

This study has several limitations, despite the intriguing findings. Firstly, due to the inclusion of samples from 54 countries in the analyses and the need to provide comparative data

collection methods a cross-sectional design was used in this study, which ultimately avoids any inference regarding potentially existing causal mechanisms from the data.

A second limitation is that this research was based at level one only on employee opinions, therefore, we did not study existing HRM in organizations but employees' perceptions of them in simultaneous comparison with assessed job satisfaction making the results vulnerable to single source bias (Podsakoff et al., 2003). Due to the single source of data at level one, we dropped testing the mediation model (identification with the organization as a mediator between sustainable HRM and job satisfaction) and replaced it with a moderation analysis. This is because, as Aiken, West and Reno (1991) point out, single source variance is unlikely to affect the interaction effect, which potentially reduces concern of the single source bias (Podsakoff et al., 2003). Third, we used only one dimension of culture (individualism-collectivism) and even though this dimension is one of the most stable across cultural groups (Fontaine et al., 2008; Tsui et al., 2007) and most strongly explains effects of organizational identification (Lee et al., 2015), it does limit a broader view of the cultural context. Using other dimensions of culture has not provided a major increase in knowledge so far (Gu et al., 2022; Hauff et al., 2015; Jang et al., 2018), but with a more extended research model, it would be interesting to see if other dimensions of culture explain the variance for job satisfaction. With the applied concept of cultural inquiry captured in the Hofstede approach, questions arise about the validity and reliability of this framework (Taras et al., 2012). Therefore, to ensure the validity of our inference, we applied additional robustness analyses using the GLOBE model (House et al., 2004), which confirmed our previous results.

Finally, the methodological issue relates to the source of data for the individualism-collectivism dimension of culture. Our data analysis combines country results (level 2) from the Hofstede project (Culture Compass™) and also individual responses (level 1) on sustainable HRM, identification with the organization and job satisfaction. This raises

questions about the validity of these data since the country-specific measurements of cultural values do not come from the same group of individual respondents answering questions on the independent variable, moderator and dependent variable. There are some critics who question the practice of treating each country as a single case. Such aggregation ignores important differences at the levels of individuals and subcultures defined by ethnicity and organization (McSweeney, 2002; Oyserman et al., 2002; Steel & Taras, 2010). Fischer and colleagues (2005) state in this context that the relationship between national culture and outcomes can only be statistically confirmed if cultural values are part of the questionnaire, rather than coming from an external data source. It would then be possible to capture individual cultural beliefs or values in a country's aggregate population and relate them to the measurement of job satisfaction. Subsequent studies should include an additional level of analysis by taking into account other organization-specific contextual elements, such as leadership, organizational culture, or organizational climate as well various national indicators (economic, cultural, institutional, etc.). Doing so would allow for a more comprehensive understanding of the phenomenon under study.

## **6 | CONCLUSION**

Sustainable HRM and its implications for individuals, groups, organizations, in both single countries and the world is one of the key areas of interest in today's HRM discourse (Cooke et al., 2022). This study is an important voice in the discussion regarding international research in sustainable HRM. Our research highlights the role of organizational identification as an important condition of the relationship between sustainable HRM and job satisfaction. Research shows that the role of organizational identification as a condition is weakened in the collectivist countries and strengthened in individualist countries. Thereby our analysis fills a gap in terms of contextual factors that influence the adoption and success of sustainable HRM in different geographical areas (Anlesinya & Susomrith, 2020).

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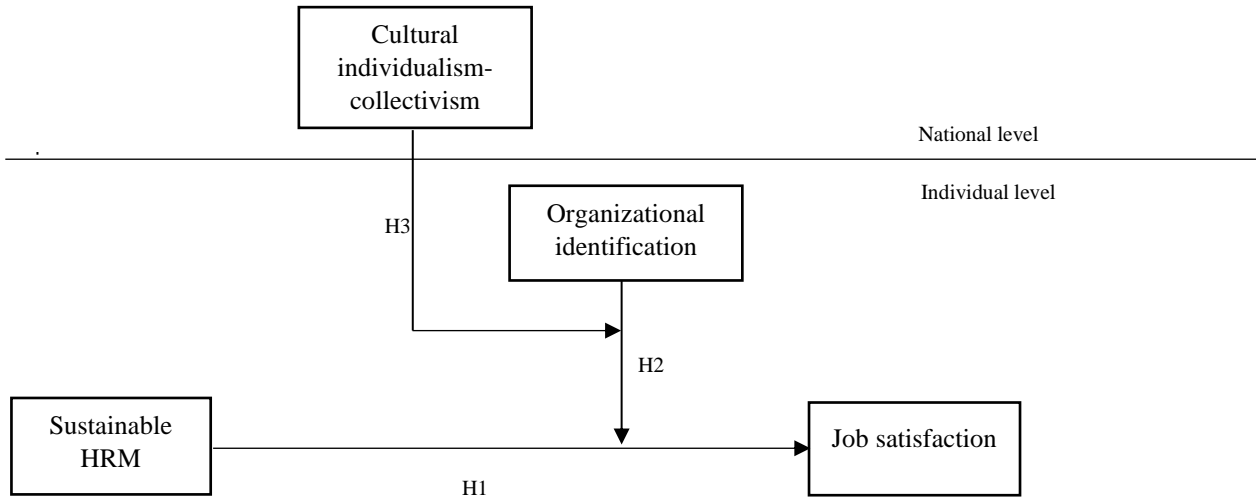
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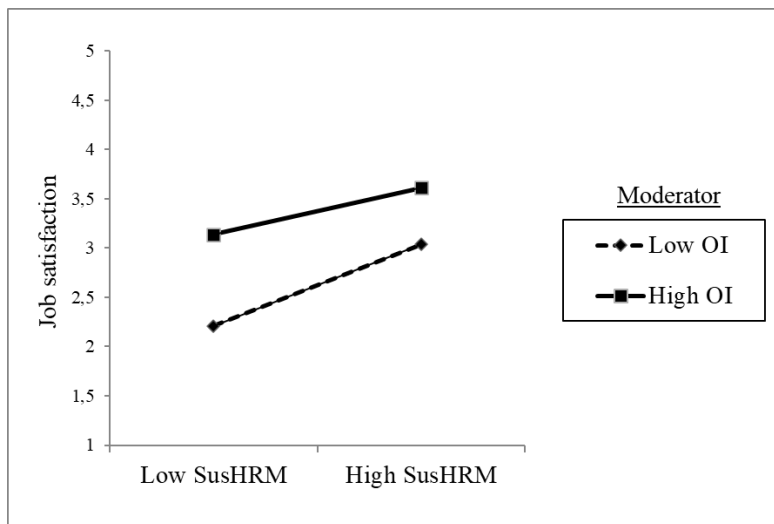
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**Figure 1.** Conceptual model and hypotheses

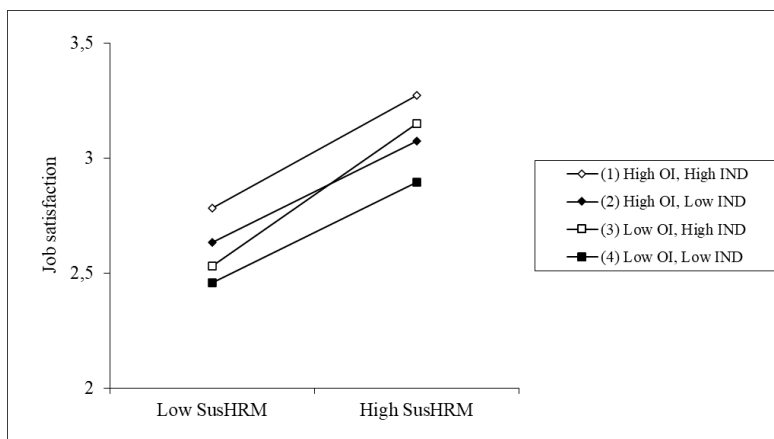


**Figure 2.** Two-way interaction between sustainable HRM and organizational identification on job satisfaction



**Notes:** SusHRM – Sustainable Human Resources Management Practices; OI – Organizational Identification.

**Figure 3.** Three-way interaction between sustainable HRM, organizational identification and individualism-collectivism on job satisfaction



**Notes:** SusHRM – Sustainable Human Resources Management Practices; OI – Organizational Identification; IND – individualism-collectivism.

**Table 1.** Comparison of measurement model

Model	Structure	$\chi^2/df$	CFI	TLI	SRMR	RMSEA
Baseline model	Three-factor	33.849	.960	.954	.055	.048
Model 1	Two-factor (SusHRM, OI+JS)	147.037	.819	.798	.104	.100
Model 2	One-factor	254.317	.685	.650	.143	.132

Notes: SusHRM – Sustainable Human Resources Management ; OI – Organizational Identification; JS – Job Satisfaction; + variables combined.

**Table 2.** Descriptive statistics and inter-correlation

	M	SD	1	2	3	4	5	6	7
1. Sustainable HRM	3.05	0.916	(.93)						
2. Job satisfaction	3.88	0.926	.425**	(.87)					
3. Organizational identification	3.49	0.894	.473**	.485**	(.88)				
4. Individualism-collectivism	49.25	23.535	-.188**	-.013	-.205**	1			
5. Education	2.74	0.508	.045**	.034**	.066**	-.191**	1		
6. Age	2.68	1.211	-.100**	.057**	.099**	.018*	-.004	1	
7. Seniority	2.71	1.075	-.063**	.061**	.119**	-.078**	.044**	.602**	1
8. Gross National Income (GNI)	26220	22352	-.198**	-.036**	-.237**	.772**	-.155**	.001	-.089**

**Note:** In brackets, reliability Cronbach's  $\alpha$ ; N=14502; \* $p < .05$ . \*\* $p < .01$ .

**Table 3.** Results of multilevel modeling analysis on job satisfaction

Level and Variable	Model					
	Null (Step 1)	Random Intercept and Fixed Slope (Step 2)	Random Intercept and Fixed Slope (Step 3)	Random Intercept and Random Slope (Step 4)	Cross-Level Interaction (Step 5)	Cross-Level Interaction (Step 6)
<b>Level 1</b>						
Intercept ( $\gamma_{00}$ )	3.901** (0.031)	3.890** (.023)	3.906** (.025)	3.907** (.028)	3.907** (.027)	3.907** (.025)
Age		.025** (.006)	.027** (.007)	.026** (.007)	.025** (.009)	.026** (.007)
Education		.011 (.014)	.011 (.014)	.011 (.014)	.011 (.014)	.011 (.014)
Seniority		.011 (.08)	.012 (.008)	.011 (.008)	.012 (.008)	.011 (.008)
SusHRM ( $\gamma_{10}$ )		.324** (.008)	.324** (.008)	.327** (.015)	.327** (.015)	.323** (.015)
OI ( $\gamma_{20}$ )		.386** (.008)	.375** (.008)	.372** (.009)	.373** (.008)	.373** (.009)
SusHRM x OI ( $\gamma_{30}$ )			-.060** (.008)	-.062** (.008)	-.062** (.008)	-.062** (.008)
<b>Level 2</b>						
Gross national income (GNI)		.001 (.001)	.001 (.001)	.002 (.002)	.001 (.001)	.001 (.001)
Individualistic-collectivistic culture ( $\gamma_{01}$ )		.002 (.002)	.002 (.002)	.002 (.002)	.002 (.002)	.002 (.002)
<b>Two way cross-level interaction</b>						
SusHRM x Individualistic culture ( $\gamma_{11}$ )					.002 (0.002)	.002 (.002)
<b>Three way cross-level interaction</b>						
SusHRM x OI x Individualistic culture ( $\gamma_{12}$ )						.002** (.001)
<b>Variance components</b>						
Within-culture (L1) variance ( $\sigma^2$ )	.805	.556	.553	.548	.548	.547
Intercept (L2) variance ( $\tau_{00}$ )	.047	.030	.030	.030	.030	.030
Slope (L2) variance ( $\tau_{11}$ )				.008	.008	.008
Intercept-slope (L2) correlation				-.169	-.170	-.168
<b>Additional information</b>						
ICC	.055					
-2 log likelihood (FIML)	19082.83	16155.690**	16126.950**	16093.119**	16092.922	16087.499**
Pseudo $R^2$	0	.31	.31	.31	.31	.31

**Notes:** SusHRM – Sustainable Human Resources Management ; OI – Organizational Identification; FIML = full information maximum likelihood estimation; L1 = Level 1; L2 = Level 2. L1 sample size = 14502 and L2 sample size = 54. Values in parentheses are standard errors; *t*-statistics were computed as the ratio of each regression coefficient divided by its standard error; \**p* < .05. \*\**p* < .01.

## Appendix 1: Items used in the study

	$\alpha$	Factor loadings
<b><i>Sustainable HRM</i></b>	.93	
<i>Corporate Social responsibility HRM</i> (adapted form: Diaz-Carrion et al., 2018)	.93	
We develop transparent and unbiased selection processes		.716
We implement specific programs to facilitate the adaptation and integration of new candidates (induction handbook etc.)		.723
We have skill training programs and continuous learning that support workers' employability		.740
We take into account employees' preferences when determining training		.759
We evaluate performance and decide career plans for all employees, regardless of their professional category, gender etc.		.775
We give workers the opportunity to decide on their careers		.776
We link part of the compensation to employees' compliance with corporate social responsibility (CSR) goals		.703
We take into consideration employees' expectations when establishing compensation		.748
We register incidents related to discrimination and carry out corrective actions		.687
We report on the performance of the company in economic, social and environmental issues		.696
We minimize psychological and physical work risks		.734
We promote sport and healthy living inside and outside work; for example, developing sports activities, raising awareness of the benefits of healthy living etc.		.702
<b><i>Green HRM</i></b> (adapted form: Dumont et al., 2017)	.89	
My company sets green goals for its employees		.847
My company provides employees with green training to promote green values		.885
My company considers employees' workplace green behavior in performance appraisals		.883
<b><i>Organizational Identification</i></b> (adapted from: Mael & Ashforth, 1992)	.88	
When someone criticizes my organization, it feels like a personal insult		.729
I am very interested in what others think about my organization		.715
When I talk about my organization to others, I usually say "we" rather than "they"		.702
My organization's successes are my successes		.807
When someone praises my organization, it feels like a personal compliment		.843
If a story in a local newspaper criticized my organization, I would feel embarrassed		.675
<b><i>Job Satisfaction</i></b> (adapted form: Cammann et al., 1983)	.87	
In general, I do not like my job		.812
All in all I am satisfied with my job		.877
In general, I like working here		.841

Notes:  $\alpha$ =Cronbach's Alpha.

## Appendix 2: Descriptive statistics of the 54 samples included in the analysis

**Table 1.** Descriptive statistics of the 54 samples included in the analysis

	<b>Sample size</b>	<b>Gender</b>	<b>SusHRM</b>	<b>OI</b>	<b>JS</b>	<b>IND</b>
	N	% Female	M(SD); $\alpha$	M(SD); $\alpha$	M(SD); $\alpha$	M
Australia	228	49	2.75(.85); .93	3.06(.99); .90	3.68(.95); .90	90
Belgium	203	58	2.67(.78); .90	3.21(.85); .85	3.80(.87); .90	75
Brazil	213	52	3.05(1.01); .95	3.76(1); .87	4.26(.97); .90	38
Bulgaria	203	46	3.39(.98); .96	3.78(.87); .91	3.80(.85); .77	30
Canada	453	48	3.13(.82); .92	3.34(.88); .87	4.00(.85); .86	80
Chile	389	59	2.45(.81); .92	3.24(.90); .89	3.85(.91); .88	23
China	499	49	3.09(.77); .92	3.61(.75); .88	3.59(.83); .84	20
Colombia	207	62	2.85(.90); .93	3.64(.87); .88	4.01(.99); .90	13
Croatia	195	78	2.91(1.05); .96	3.59(.92); .92	4.05(.92); .91	58
Czech Republic	205	62	3.04(.85); .92	3.87(.79); .90	4.27(.74); .84	33
Denmark	200	57	3.23(.41); .85	3.73(.42); .80	4.06(.51); .77	74
Ecuador	200	53	3.74(.88); .95	3.95(.78); .81	4.17(.91); .85	8
Egypt	436	45	3.65(.54); .75	3.91(.87); .89	3.48(1.05); .78	37
Estonia	82	38	3.39(.87); .91	4.05(.74); .84	4.37(.76); .83	60
Finland	255	78	2.91(.76); .91	3.20(.90); .84	4.04(.90); .90	63
France	252	48	2.58(.79); .91	3.16(.85); .86	3.65(.97); .90	71
Georgia	455	58	2.99(.89); .93	3.23(.97); .88	3.75(1.05); .91	41
Germany	450	46	2.99(.72); .88	2.94(.86); .84	3.83(.86); .90	67
Ghana	201	44	3.28(.82); .93	3.87(.69); .82	3.76(.87); .82	15
Greece	200	68	3.24(.86); .94	3.42(.77); .87	3.79(.93); .90	35
India	200	42	4.11(.54); .90	4.07(.62); .83	4.06(.76); .82	48
Indonesia	253	68	3.31(.81); .94	3.71(.53); .72	4.00(.65); .82	14
Iran	199	69	2.91(1); .95	3.67(.71); .85	3.80(.83); .83	41
Ireland	224	58	3.17(.83); .92	3.35(.81); .86	3.88(.86); .87	70
Israel	263	79	2.98(.67); .85	3.26(.88); .88	3.89(.79); .88	54
Italy	891	55	2.59(.79); .91	3.41(.80); .88	4.07(.90); .83	76
Japan	400	50	2.21(.82); .94	2.83(.81); .84	3.16(.96); .88	46
Lithuania	190	86	2.81(.87); .92	3.69(.76); .87	4.22(.75); .89	60
Malta	163	71	2.48(.71); .91	3.40(.93); .90	3.75(1.01); .90	59
Mexico	451	56	3.51(.93); .94	3.79(.90); .85	4.39(.80); .90	30
Nepal	226	34	3.55(.81); .94	4.00(.68); .79	3.83(.89); .81	30
Netherlands	97	58	2.76(.48); .84	3.12(.75); .88	3.91(.76); .87	80
New Zealand	374	55	2.95(.89); .95	3.46(.80); .87	3.87(.92); .91	79
Nigeria	141	53	3.33(.70); .88	3.66(.69); .76	3.79(.87); .79	30
Norway	119	51	2.95(.79); .91	3.45(.71); .82	4.03(.92); .91	69
Pakistan	205	37	4.33(.50); .93	4.30(.39); .73	4.30(.54); .75	14
Peru	200	36	3.05(.89); .94	3.95(.79); .85	4.01(.97); .88	16
Philippines	265	49	3.61(.80); .95	4.03(.63); .83	4.16(.79); .90	32
Poland	283	58	2.94(.85); .91	3.26(.94); .88	3.86(1); .90	60

Portugal	213	64	2.69(.86); .94	3.14(.92); .94	3.61(1.04); .91	27
Serbia	211	69	3.12(.96); .94	3.40(1); .90	4.03(.91); .88	25
Slovak Republic	258	47	2.94(.85); .93	3.32(.90); .87	3.96(.93); .89	52
South Africa	191	70	3.21(1.02); .96	3.75(.81); .88	3.98(.86); .84	65
Spain	205	64	3.06(.82); .92	3.44(.91); .88	3.91(.93); .89	51
Sri Lanka	288	67	3.84(.67); .92	4.04(.64); .83	3.99(.73); .80	35
Suriname	238	55	2.67(.97); .95	3.75(.82); .86	3.93(.90); .87	47
Switzerland	172	58	2.79(.89); .93	3.30(.79); .83	3.83(.92); .90	68
Thailand	241	56	3.11(.70); .91	3.48(.71); .86	3.70(.72); .84	20
Turkey	390	45	3.16(.93); .94	3.50(.77); .85	3.85(.88); .90	37
U.K.	671	51	2.78(.80); .92	3.16(.94); .89	3.75(1.01); .94	89
Ukraine	186	62	3.43(.82); .93	3.54(1); .91	3.65(1); .84	25
U.A.E	205	69	3.34(.88); .94	3.55(.87); .85	3.82(1.01); .91	36
Uruguay	111	54	2.38(.84); .91	3.24(.88); .89	4.02(.90); .88	36
U.S.A	252	46	2.97(.89); .93	2.86(1.04); .90	3.67(1.15); .93	91

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**Notes:** N=14502; SusHRM – *Sustainable Human Resources Management* ; OI – *Organizational Identification*; JS – *Job Satisfaction*; IND – *Hofstede's Individualism-Collectivism*;  $\alpha$  – Cronbach's Alfa.

### **Appendix 3:** Robustness analysis: Alternative method for measuring culture (GLOBE approach)

Theorizing about the moderation role of cultural individualism suggested that such interaction could exist. The research presented here supported this assumption. Despite this, to make sure our inference was correct we conducted additional robustness analyses using a different approach to studying national culture – the GLOBE model (House et al., 2004). Additional robustness analyses address the postulated need for greater research credibility and replicability (Nosek et al., 2022).

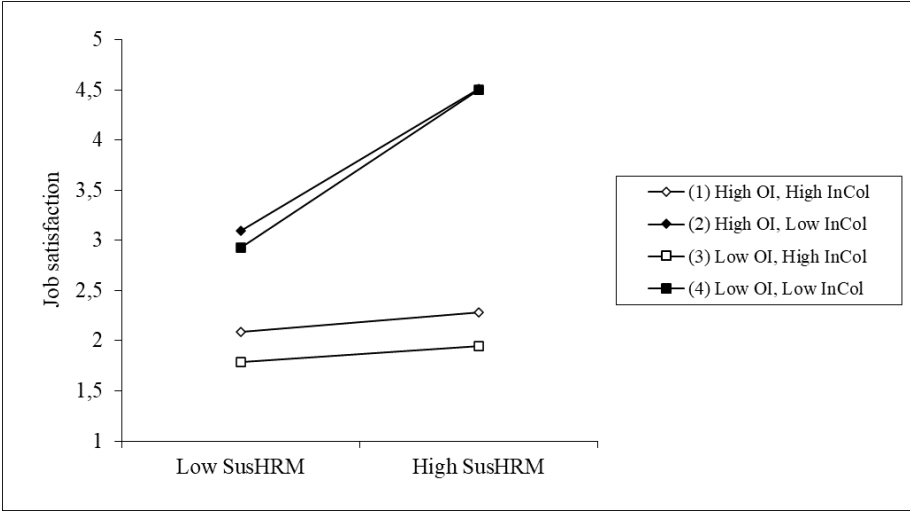
The GLOBE, unlike the Hofstede approach, focuses not only on values and beliefs (how things should be) but also on existing practices (how things are). In addition, it captures two dimensions: in-group collectivism (degree to which collective loyalty, pride, and cohesiveness is expressed) and institutional collectivism (reflects the extent to which collective distribution of resources is accepted) (House et al., 2004). As a result, there are 4 dimensions that can be considered in analyses. Previous research has also shown that the Hofstede model can explain various job outcomes differently than GLOBE (Brewer & Venaik, 2011), leading to conflicting interpretations. The problem with the GLOBE approach is the smaller number of countries with available indicators, resulting in 19 countries being excluded from our robustness analyses (including: Belgium, Bulgaria, Czechia, Croatia, Estonia, Ghana, Malta, Lithuania, Nepal, Norway, Pakistan, Peru, Serbia, Slovakia, Sri Lanka, Suriname, Ukraine, U.A.E and Uruguay). We obtained country-specific data from:

<https://globeproject.com/results/countries/POL?menu=country#country>

Under the same assumptions of constructing the research model (including controlling at the L1 level for age, education and seniority, and at the L2 level for GNI ratio), we found that (in Step 2: fixed slope) institutional collectivism practices (but not institutional collectivism

values, in-group collectivism values and practices) predicts employee job satisfaction scores ( $\beta = -.195; p < .01$ ). In short, results provide evidence that a 1-unit increase in institutional collectivism practices is associated with a -.195 decrease in a country's average employees job satisfaction. The conclusion indicated that not collective loyalty, pride and cohesion (high in-group collectivism), but valued individual goals and achievements (low institutional collectivism) explain the results for job satisfaction in the different countries. In Step 4 (random slope) the results tell us that employees from countries with high institutional collectivism have significantly lower job satisfaction than employees who living in countries with low institutional collectivism ( $\beta = -.184, p < .05$ ). In the 5th Step, we tested the interaction between sustainable HRM and institutional collectivism. The result was similar and statistically insignificant to Hofstede's individualism-collectivism dimension ( $\beta = -.038; 95\%CI -.138; .063$ ). Thus, it can be concluded with higher confidence that the individualism-collectivism dimension does not have a moderating role in the relationship between sustainable HRM and job satisfaction. In the last Step, we tested a three-way moderation of sustainable HRM x organizational identification x institutional collectivism. The result, as with the Hofstede's model, demonstrated statistical significance ( $\beta = .086, p < .01$ ) and indicated that the sustainable HRM x organizational identification increase job satisfaction in individuals with low identification with the organization more strongly in countries with low institutional collectivism (-1SD:  $\beta = .431; p < .01$ ) than in cultures with high collectivism (+1SD:  $\beta = .341; p < .01$ ). Therefore, our main analysis has received additional empirical support. Figure 4 show a graphical representation of the three-way interaction between the tested variables.

**Figure 4.** Three-way interaction between sustainable HRM, organizational identification and institutional collectivism practices on job satisfaction



**Notes:** SusHRM – Sustainable Human Resources Management Practices; OI – Organizational Identification; InCol – Institutional Collectivism Practices.

#### **Appendix 4:** Test the differences between woman and man

Due to the recommendations of an anonymous reviewer, we conducted additional analyses to compare the tested effects by gender variable.

In the first step, we tested measurement invariance distinguished based on gender of respondents (women and man). We analyzed three levels determining different outcomes: configural (which refers to accuracy of the measurement model across samples and informs that the analyzed structure is the same across compared groups), metric (discerning whether factor loadings are equivalent across groups and whether the latent construct is understood in the same way), and scalar (which allows for meaningful comparison of latent mean scores between the analyzed samples).

The results showed (table 1) that all the nested models represented a good fit to the data, with the resulting  $\Delta$ CFI and  $\Delta$ RMSEA values of  $\leq 0.01$ . These suggest that measurement model is equivalent across the examined sub-groups.

**Table 1.** Fit measures in measurement invariance between groups

Variable	Level of invariance	$\chi^2$	$df$	CFI	RMSEA	$\Delta$ CFI	$\Delta$ RMSEA
<b>Gender (Man vs Women)</b>							
<b>Sustainable HRM</b>	Configural invariance	16.327	5	.998	.017	.001	.005
	Metric invariance	234.955	20	.994	.024	.006	.012
	Scalar invariance	236.735	21	.994	.024	.006	.012

In the second step, we conducted multigroup structural equation modeling, which allowed us to assess the strength of relationships between variables and differences in regression weights (table 2).

The results showed some differences between groups. Most importantly, for women, the relationship between organizational identification and job satisfaction is stronger than for man (z-score = -2.098;  $p < .05$ ). Also, for women the relationship between sustainable HRM and job satisfaction is stronger in situations when they possess greater identification with the

organization. For man, this moderation were negative, i.e., those with lower levels of identification with the organization benefit more from the impact of sustainable HRM practices (z-score = -3.367;  $p < .01$ ). Moreover, three-way interaction showed that for women, the effects of sustainable HRM practices on their job satisfaction are stronger than for man (z-score = -2.730;  $p < .01$ ), when they have higher levels of organizational identification and functioning in more individualistic cultures.

**Table 2.** Standardized regression weights between tested relationship and differences between respondents

<b>Independent variable</b>		<b>Dependent variable</b>	<b>Women (N=408)</b>	<b>Man (N=400)</b>	<b>z-test</b>
Sustainable HRM (SusHRM)	->	Job satisfaction	.315***	.355***	2.457**
Organizational identification (OI)	->	Job satisfaction	.390***	.343***	-2.098*
Individualism-collectivism (IND)	->	Job satisfaction	.049*	.011	-1.947
SusHRM x OI	->	Job satisfaction	.048**	-.071**	-3.367**
SusHRM x OI x IND	->	Job satisfaction	.109***	.045*	-2.730**

Notes: \* $p < .05$ . \*\* $p < .01$ ; \*\*\* $p < .001$

The additional analyses presented demonstrate that the gender of the respondents plays an important role in explaining the impact of sustainable HRM and organizational identification on job satisfaction, and this variable should be taken into account in testing such research models.