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On the importance of sustainable human resource management for the adoption of sustainable development goals

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ABSTRACT

Today, firms are becoming increasingly aware of the importance of social, ethical, and ecological objectives. In addition to financial profit, organizations are setting themselves new goals, focusing on individual, communal, and environmental-friendly performance and development. One of the disciplines that is promoting “green” organizations is Sustainable Human Resource Management (SHRM). Sustainable development goals (SDGs) are achieved through the adoption of new ecological techniques by the organization’s human capital and by the integration of innovative sustainable strategies. This systematic literature review examines the key role of SHRM in developing a sustainable work environment and in facilitating the attainment of SDGs. Based on a selection of empirical and conceptual articles, this review identifies the antecedents and outcomes of SHRM and highlights the obstacles to sustainable implementation not only at the level of the firm, but also from an international perspective. Four propositions are formulated that might be empirically tested in future studies. Research gaps in the existing literature are identified and potential future directions are suggested for further research in the field of sustainable management.

1. Introduction

The exponential growth of human economic expansion has had a devastating effect on the environment and on the world’s natural resources. At the same time, the engagement in social action to redress this situation is very limited (Bauman, 2000; Korten, 2001). Recent studies have drawn attention to the impact of the human factor on sustainable development and resource preservation (Pfeffer, 2010; Speth, 2010). With the increasing focus on social responsibility and sustainable performance, organizations have set themselves new goals other than mere financial profit, such as a commitment to social and environmental outcomes (Elkington, 1997). In fact, an international survey of 2800 global companies revealed that 70% of these organizations include sustainability as a primary issue in their strategic plans and agendas (Kiron et al., 2012).

In 2015, the UN General Assembly presented “the 2030 Agenda for sustainable development” consisting of 17 sustainable development goals (SDGs) and 169 targets. The targets are built on the Millennium Development Goals (MDGs) and aim to accomplish their uncompleted objectives. The 17 goals are unified and incorporated in three dimensions of sustainable development: economic, social, and environmental. They are established on what are known as the five Ps: “people, planet,

prosperity, peace, and partnership”. With regard to “people” and “prosperity”, the aim of the SDGs is to accommodate appropriate settings and generate specific conditions that enhance the development of sustained economic growth, efficient resource allocation, collective prosperity, and decent work environments. From the business perspective, the ultimate objective of the SDGs is to establish “sustainable, innovative, and people-oriented” economies that improve employment opportunities, in particular for the young generation and for women. The mission for organizations is to ensure that their workforces are healthy and well educated, and to nurture the awareness and proficiencies required to create productive employees and proactive citizens that contribute to society. The attainment of SDGs requires a strategic process involving several actors: the private and public sectors, governments, multi-national enterprises, non-governmental and philanthropic organizations, and individuals. Collaboration and interaction between these agents will represent a step further toward achieving sustainable consumption, integrating eco-friendly production and building harmonious societies. The 2030 Agenda describes itself as “an Agenda of the people, by the people, and for the people – and this will ensure its success” (United Nations, General Assembly, 2015, p. 12). Accordingly, we can clearly identify the dual role of the human element as both the initiator and the beneficiary of the implementation of SDGs.

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At institutional and corporate level, we consider that one of the areas that can contribute most to their fulfillment is Human Resource Management (HRM).

Scholars from fields such as marketing, economics and finance, and operation and supply chain management are currently assessing strategies and policies for integrating SDGs into the goals of the firm. However, research on the contribution of HRM to sustainable development remain scarce (Aguinis and Glavas, 2012; Jackson et al., 2011; Pfeffer, 2010). Various business disciplines have examined the relationship between manufacturing and operational practices and sustainable performance; HRM and SDGs are interconnected through the common component of the human factor, since people's attitudes, behaviors, and resource consumption have a direct impact on social and ecological practices. The research carried out to date has provided clear examples of how the labor force and the functional areas of the firm are being re-conceptualized to meet these objectives.

Environmental awareness began with the “green movement” that espoused ecological and social engagement, while sustainable management and practices, of which sustainable human resource management (SHRM) constitutes a clear example, transfer and operationalize this ideological movement into business applications. Therefore, the objective of SHRM is to reach the organizational targets, while striking a balance between business growth and the preservation of environmental resources (Jennings and Zandbergen, 1995; Starik and Rands, 1995).

To investigate the role of SHRM in the adoption of SDGs, we identify a set of interconnected HR tasks, which have been incorporated by firms to promote sustainable practices. These functions are classified into two categories: operational, and managerial. The operational responsibility consists of a strategic process comprising policy-making, planning, implementation, auditing, action-correction, and performance assessment (Barnes, 1996). With regard to the policy and planning role, Daily and Huang (2001) indicate that organizations and HR managers should be committed to complying with civic regulations and protocols vis-à-vis sustainability, ensuring consistent reporting of environmental issues and transparent disclosure, distributing responsibilities equally, and setting a specific timeline and methodological framework to be applied (Jackson, 1997; Johnson, 1997). As for the operationalization and auditing functions, HR departments should accommodate an explicit structure to manage resource usage, develop measures and processes to avoid undesirable outcomes that might harm society or the environment, and generate a monitoring system for evaluating the sustainable practices of the organization.

With regard to the managerial role, HRM must secure support from top-level management, boost employees' empowerment, provide continuous training, implement an efficient system of remuneration, and build cross-functional teamwork (Daily and Huang, 2001). Support from top-level management can help to establish a flexible and lean culture that avoids bureaucratic structures, centralized authority, and vertical communication flows (Janson and Gunderson, 1994). Daily and Huang (2001, p. 5) state that the mission of HRM is to continuously conduct “trainings, interactive skills, team building, benchmarking, and brainstorming” while Bhushan and MacKenzie (1994) stress the importance of tackling societal and ecological issues. Daily and Huang confirm that HR managers should provide autonomy and empowerment to the workforce in order to promote a participative working environment. The last HR task they mention for backing sustainable practices is the formation of cross-functional groups to facilitate the collaboration and coordination between various organizational divisions (Daily and Huang, 2001; Leitch et al., 1995). The link between SHRM and SDGs is perceived as “means to an end” (Huselid et al., 2005). In this context, the fundamental task of SHRM is the supervision of human resources use and consumption; specifically, it is perceived as the managerial control of human capabilities and skills. This key role has a direct impact on attaining six of the UN's SDGs: 3 (health and wellbeing), 5 (gender equality), 8 (decent work and economic growth), 10 (reduction

of inequality), 12 (responsible consumption and production), and 17 (implementation and revitalization of global partnerships) (United Nations Department of Public Information, 2017).

Nevertheless, achieving a consensus on what SHRM should include faces a number of obstacles: the terminology used in the research, the lack of a unified definition, the ambiguity in the conceptualization of the framework, and the lack of clarity in the developmental processes applied in sustainable firms. Previous studies have highlighted the need to identify appropriate HRM approaches and systems for implementing sustainability practices (Jackson et al., 2011; Taylor et al., 2012). Dubois and Dubois (2012) state that “HRM is a core partner in organizational environmental sustainability” (Taylor et al., 2012, p. 790). Nurturing the human aspect leads to a better understanding of SHRM and increases its potential for encouraging sustainable performance in the workforce and for optimizing resource management (Stone, 2000). The main debate in the literature concerns the complementarity of HRM and SHRM practices and the necessity to establish a clear conceptualization of SHRM so as to be able to identify the ultimate collective goal for the labor force, the firm, and the environment.

Jackson et al. (2011, p. 102) identifies the following relevant issues in the SHRM field: employees' attitudes and behaviors in the workplace related to environmental concerns, HRM strategies and regulations supporting sustainability, and differences or similarities in the green HRM practices applied in various countries. In this context, we hope to contribute to the literature by answering the following research question: how are HRM departments developing green strategies and implementing socially- and environmentally-friendly practices to achieve SDGs? The study also examines the impact of these practices on the firm's performance as a whole. To do so, we present a systematic literature review comprising four sections: 1) The conceptualization of SHRM; 2) The antecedents of SHRM; 3) The outcomes of the adoption of social and eco-friendly practices, first at HR level and then at organizational level; and 4) The implementation of SHRM with a cross-national perspective.

The remainder of this paper is structured as follows: the second section presents the theoretical paradigms of SHRM and its impact on sustainability. We then describe the methodological framework applied to select our sample and to structure our review of the literature. This is followed by a content analysis interpreting the results of research in the SHRM field. In the fifth section, we discuss the outcomes of the study, and then conclude with an appraisal of the implications of the findings and offer some suggestions for future research directions.

2. Theoretical background

From a theoretical point of view, SHRM has been addressed from various perspectives, such as institutional theory (DiMaggio, 1983; Scott, 1987), stakeholder theory (Freeman, 1984), paradox theory (Poole and Ven, 1989), risk society theory (Beck, 1992a), organizational development theory (Porras and Robertson, 1986), system theory (Bertalanffy, 1950), a resource-based view (Wernerfelt, 1984), and signaling theory (Spence, 1973). However, the ability, motivation, and opportunity (AMO) theory (Appelbaum et al., 2000) is the one most often applied in the literature, given that it provides a conceptual model which clarifies the strategies and implications of the HR functions that promote sustainable performance (Gholami et al., 2016; Guerci et al., 2016; Renwick et al., 2015, 2013; Stone, 2000). In the following lines we summarize the theories addressing the connections between SHRM and sustainability.

According to the stakeholder paradigm, the linkage between SHRM and sustainability is based on an “open-system” approach established by the interconnectedness and interaction of various actors such as stakeholders, regulators, social and environmental agents (Benn and Bolton, 2011). As stated by Schuler and Jackson (2005), the stakeholder framework covers both internal and external organizational responsibilities. They indicate that HRM strategies must not only fulfill the

interests of employees but must also match the needs of all the stakeholders. In this context, the principles of this theory highlight the importance of the societal engagement and involvement of the actors mentioned above in the business field. The interactive approach accommodates a wider spectrum of values and activities addressing collective concerns (Kramar, 2014), and therefore justifies the convergence of practices between SHRM and sustainability.

From the perspective of resource allocation, a large number of scholars adopt the resource-based view (RBV) theory to validate the bridge connecting SHRM and sustainability, as both are directly related to resource-oriented strategies and management (Arulrajah and Opatha, 2016; Florea et al., 2012; Nejadi et al., 2017). The RBV theory postulates that when the HR division incorporates sustainable practices associated with the labor force (i.e., involvement, motivation, retention, and empowerment), it induces an added value to the firm, both financial and non-financial (Barney, 1991; Gong et al., 2009). According to the RBV framework, the development of human competencies and skills and the safeguarding of natural resources are recognized as core factors for generating a competitive advantage (Arulrajah and Opatha, 2016; Bowman and Ambrosini, 2000; Lockett et al., 2009).

As for the operationalization of SHRM, institutional theory provides a clear explanation of how HR functions integrate the “greening” process of the organization (Arulrajah and Opatha, 2016). This theory validates the implementation of sustainability as a response to external pressures exerted by the government and the civic community (Russo and Fouts, 1997). According to the institutional approach, the adoption of SHRM is accomplished in two stages: legitimization at institutional level, and formalization at departmental level, through green HR tasks (Arulrajah and Opatha, 2016). The institutional paradigm is perceived as an aspect of the “goodness-of-fit” between ecosystems and HR systems, satisfying the communal needs of both internal and external organizational actors (Germain and Gitterman, 1995; Greene, 1999). Similarly, system theory describes SHRM as a sub-system that interacts with the environment and society to establish the viability and credibility of the organization (Jackson and Schuler, 1995). For instance, it suggests that SHRM can achieve better sustainable performance and green practices by retaining employees, developing green skills, and enhancing proactive attitudes toward social and environmental matters.

As mentioned above, the AMO theory is widely applied by scholars in the green HRM literature supporting the association between the human capital and social, ethical, and ecological performance. It is a multi-dimensional model that aims to enhance the sustainable outcomes of the firm based on three factors: an ability to engage and to contribute to green activities and a willingness to foster an eco-friendly atmosphere inside and outside the workplace; an understanding that increasing motivation for societal activities is a joint responsibility involving both the employees and the organization (while the employees’ duty is to show higher engagement in sustainable practices, the organization’s role is to compensate and remunerate its personnel when they demonstrate proactive approaches and green behavior) (Opatha, 2015); and finally the opportunity to accommodate workers with a decent work environment and a supportive organizational culture that promotes a green attitude and fosters involvement in volunteering activities (Renwick et al., 2013). In our review of the literature, we present the results under the scope of AMO theory identifying green determinants for both individuals and organizations in their attempts to achieve SDGs.

3. Methodology

In this systematic review, we use a multi-stage method to develop an in-depth analysis of the SHRM field and to identify the predictors of SDG attainment. The research period covers more than two decades (1995 until 2017) tracking the advancement of the SHRM literature. The first step consists of a database search and the second step a

reference search, using the same keywords for both. Like previous studies on SHRM, we use the following keywords in the search engine: “sustainable human resource”, “sustainable human resource management”, “green human resource”, “green human resources management”, “sustainability and HR”, “green HR”, “green HRM”, “sustainable HR”, and “sustainable HRM”. These keywords are chosen in view of the aim of the study, and they also allow us to group the selected papers into three categories: antecedents, outcomes, and implementation. Articles published in peer-reviewed journals were chosen from the following databases: Web of Science, ProQuest, Business Source Premier, and Google Scholar. The various examination fields comprised the following disciplines: “Business”, “Environmental Studies”, “Industrial Relations and Labor”, “Management”, and “Applied Psychology”. In the study we include 46 journals,¹ which provided an initial sample of 164 articles. We excluded 51 articles not directly related to SHRM issues, for example, articles with a broader view of sustainability.² Subsequently, after reading the abstracts, discussions, and conclusions of the remaining 113 articles, we excluded 41 articles that did not discuss green antecedents or green outcomes at individual or organizational levels. This left us with a final sample of 72 articles. We classified the studies according to the following criteria: conceptualization, level of analysis, antecedents, outcomes, implementation techniques, and barriers. For the analysis of the antecedents, we extracted data using the relative terminologies/codes: green behaviors (GB), green values (GV), and green competencies (GC) at the individual level; and green HRM (GHRM), collectivistic identity (CI), and organizational culture (OC) at the firm level. With regard to SHRM implementation and outcomes, we identified data from the selected articles using the level of analysis as our classification criterion. With this approach, the benefits of SHRM were revealed at organizational, sector, and cross-national dimensions. As for the last section investigating the barriers to SHRM, we applied five terminologies/codes for data extraction: “obstacles”, “paradox”, “barriers”, “challenges”, and “problems”.

Table 1 displays the number of articles per journal included in the study.

4. Analysis

4.1. Conceptualization of SHRM

First of all, it is important to distinguish between strategic HRM and SHRM, as they have different roles in the organization. Developed in the late 1970s and 1980s, the central role of strategic HRM focuses on the financial and economic outcomes of the organization’s labor force, implementation of HR practices, and monitoring of the human capital (Frombrun et al., 1984; Nikandrou and Papalexandris, 2007; Wright and Snell, 1991). On the other hand, SHRM places the emphasis on developing an innovative workplace with internal and external social involvement, on increasing awareness and responsibility toward environmental preservation, and on improving the distribution and consumption of resources to promote organizational success in a competitive environment (Ehnert, 2009a; Kramar, 2014). While strategic HRM goals are typically firm-oriented, SHRM objectives are deliberately communal-oriented. The definition of sustainability commonly

¹ We include articles from journals in the Hospitality Management and Tourism field such as Journal of Human Resources in Hospitality & Tourism, Tourism Management, Journal of Sustainable Tourism, Tourism Economics, Cornell Hotel and Restaurant Administration Quarterly, and Hospitality Management. The Hospitality and Tourism sector is one of the most advanced and successful sectors in green management and sustainable performance.

² We exclude articles with broader view of sustainability such as Corporate Social Responsibility, Organizational Citizenship Behaviors, Corporate Social Performance, Sustainable Operational/Production Management, and Sustainable Supply Chain Management.

Table 1
Distribution of articles per journal used in the study.

	Name of Journals	#Articles in the literature review	# Articles in the content analysis
1	*Journal of Management	3	3
2	*International Business Research	1	1
3	The Academy of Management Journal	3	1
4	Theory, Culture & Society	1	0
5	British Journal of Management	1	0
6	*Tourism Management	1	1
7	*Journal of Sustainable Tourism	1	1
8	*International Journal of Human Resource Management	20	19
9	*Environmental Management and Health	1	1
10	*Human Resource Development International	4	4
11	Organizational Theory and Public Policy	1	0
12	*Human Resource Management	2	2
13	*European Journal of International Management	1	1
14	*Journal of Business Ethics	5	5
15	*California Management Review	1	1
16	*Journal of Cleaner Production	11	9
17	*Journal of Applied Psychology	1	1
18	*Tourism Economics	1	1
19	*Industrial Management & Data Systems	1	1
20	*Personnel Psychology	1	1
21	International Journal of Production Research	1	0
22	*Cornell Hotel and Restaurant Administrant Quarterly	1	1
23	*Organization Management Journal	1	1
24	*Resources, Conservation and Recycling	3	3
25	*Journal of Management Studies	1	1
26	*International Journal of Hospitality & Tourism Administration	1	1
27	*Hospitality Management	1	1
28	*International Journal of Contemporary Hospitality Management	2	2
29	MIT Sloan Management Review	1	0
30	*Journal of Operations and Production Management	2	1
31	Journal of Consumer Marketing	1	0
32	*Journal of Managerial Issues	1	1
33	Research Journal of Recent Sciences	1	0
34	*Business Horizons	1	1
35	*Human Resource Management Journal	1	1
36	*Organization & Environment	1	1
37	The Academy of Management Perspective	1	0
38	Canadian Journal of Sociology	1	0
39	*The Academy of Management Review	3	1
40	*Journal of World Business	1	1
41	*Journal of Organizational Behavior	1	1
42	*Management Revue	1	1
43	Administrative Science Quarterly	1	0
44	Journal of Human Resources in Hospitality & Tourism	1	0
45	Contemporary Management Research	1	0
46	*Human Resource Management Review	1	1

used in the literature is provided by the United Nations World Commission on the Environment and Development, which describes it as “meeting the needs of the present generation without compromising the ability of future generations to meet their own needs” (United Nations Documents, 1987, p. 41). From the perspectives of production and the environment, various indicators have been used to measure and assess sustainable performance. Jia et al., 2017, p. 3) classify these factors into five categories such as: “reducing the generation of toxic and hazardous products, environmental qualifications and certificates, service cycle processing time, minimizing the service costs per total revenue, and the service output per hour/facility utilization”. As for the conceptualization of sustainability from the HR viewpoint, Ehnert et al. (2015, p. 90) present a sophisticated framework for SHRM, defining it as “the adoption of HRM strategies and practices that enables the achievement of financial, social, and ecological goals with an impact inside and outside the organization and over a long-term time horizon, while controlling for unintended side effects and negative feedback”. Two components can be induced from Ehnert et al.’s definition: a human or ecological sustainability acknowledging various paradoxical objectives and goals in different dimensions (economic, ecological, and social) (Docherty et al., 2009; Jackson et al., 2011), and a multifaceted interconnectedness between “HRM systems and their internal and

external environments” as the dynamic core of resource generation and reproduction (Ehnert, 2009b).

Ehnert, 2009a, p. 173) Ehnert, 2009a Ehnert, 2009a, p. 173) clarifies the link between HRM and SDGs by providing three main interpretations: first, a responsibility-oriented approach based on an open system model including employees’ well-being, community prosperity, and quality of work-life balance; second, efficiency-oriented and innovation-oriented corporate purposes, similar to Friedman’s (1970) approach, focusing on the connection between economic and sustainability outcomes. The latter can be interpreted as balancing between profit and cost, while taking into account the changes in the environment, technological progress, and the quality of services and products; and third, a substance-oriented approach directed toward responsible consumption and reproduction of resources for future organizational viability. Following this classification, Ehnert (2009a,b) also argues that sustainable development requires the co-existence of the following three interpretations: human responsibility, firm efficiency, and resource management. Moreover, Jabbour and Santos (2008, p. 2134) justify the choice of HRM as a key factor contributing to sustainability performance, for four reasons: “HRM is considered as a potential foundation for the advancement of sustainability in the organization; both HRM and sustainability need long-term planning and

determination to induce economic outcome; to promote sustainable performance is the new paradigm of HRM; and to enhance the effectiveness of HRM practices by satisfying various shareholders' needs". The authors expand on the relationship between HRM and SDGs by highlighting three major aspects of management practices: innovation, cultural diversity, and environmental performance. For their part, Scully-Russ (2012) and Taylor et al. (2012) conceptualize SHRM as an integrative component of various HR divisions. The role of SHRM is simultaneously perceived both as a means, to develop sustainability through HR policies by directing employees' mindsets, and as an end, through the establishment of HRM systems entailing the "social, moral, and economic" aspects of the firm (Ehnert, 2009a; Ehnert, 2009b; Osland et al., 1999; Taylor et al., 2012). Scully-Russ (2012) identifies a "mutually co-constructive" relationship between three models of Human Resource Development (HRD) (strategic, critical, and holistic) and sustainability development (Bauman, 2000; Beck, 1992b; Giddens, 1991). He claims that the link between "eco-modernism" and strategic HRD is accomplished through the implementation of a continuous learning process of social involvement. As for combining sustainable development and critical HRD, the author states that this is achieved through the enhancement of corporate social responsibility performances. Lastly, Scully-Russ proposes that the relationship between "eco-consciousness" and holistic HRD is attained through promoting reflection on moral, ethical, and ecological implications by accommodating employees with a specific mindset and encouraging their sustainable thinking (Scully-Russ, 2012, p. 400).

SHRM and sustainability are two paradigms that converge toward a common organizational benefit, not only satisfying shareholders' objectives but also operating in a responsible manner, while taking into consideration collective welfare and the preservation of natural resources. For instance, SHRM can be defined as the "hardware" of the organization, while the employees are considered as the engine of the "software" part (Florea et al., 2012); both are complementary components in the accomplishment of SDGs. A summary of the conceptualization of SHRM is provided in Table 2.

4.2. Antecedents of SHRM

4.2.1. Green behaviors, green competencies, and green values

The review of the literature reveals that individual characteristics, attributes, and behaviors are important drivers of sustainable performance. They are considered as facilitators of the metamorphosis of organizations into more socially responsible, green-oriented entities. The following section consists of three sub-parts which outline the antecedents of SHRM at individual level, classified as: Green Behaviors (GB), Green Competencies (GC), and Green Values (GV).

4.2.1.1. Green behaviors (GB). GB are associated with any humanistic conduct toward colleagues at work, firm as a whole, public and social communities, and the environment. These behaviors are perceived as "good" actions that benefit the "collective" interest. Norton et al. (2015, p. 105) propose a conceptual model examining two types of employees' green behaviors (EGB): required EGB³ and voluntary EGB.⁴ Required EGB are performed within the context of job duties, also known as task-related EGB; for their part, voluntary EGB are similar to organizational citizenship behaviors (OCB), consisting of personal and social initiatives toward the internal and external work environment including activities beyond the firm's requirements. Their findings suggest a framework

³ Required EGB, also known as task-related green behaviors, are performed within the context of employees' required job.

⁴ Voluntary EGB are green behaviors involving individual initiatives that exceed organizational expectations, such as developing environmental interests, engaging in environmental programs, lobbying and activism, and encouraging others to engage in social events.

founded on "person-environment" interaction, categorization and taxonomy of job performance, and self-determination theory. The authors identify discrepancies between voluntary and required EGB relative to "institutional, organizational, leader, team, and employee" levels and dependent on contextual factors. They generate a spectrum of EGB with different shades at various firm levels. However, the literature still lacks in-depth empirical studies identifying the types of individual behaviors that can promote specific sustainable performances, toward other individuals, organizations, or the ecosystem. Moreover, there is a need to differentiate between the nature of proactive behaviors toward society and proactive behaviors toward the environment in order to classify their different effects on sustainability.

4.2.1.2. Green competencies (GC). As identified in the literature, scholars have conducted both qualitative and quantitative studies addressing GC and assessing their impact on SHRM. GC are described as employees' green skills and green talents (Pinzone et al., 2016) for promoting environmental friendliness, sensitivity to societal matters, and the alignment between individual and green consumerism. Environmental awareness reflects "an individual's orientation toward the environment and an individual's concern toward ecological issues" (Kim and Choi, 2005, p. 593). Tantawi et al., 2009, p. 31) explain GC and sustainability development as a process of determining "what people know about the environment", "how they feel about it" and "what actions they take and efforts they exert to preserve the environment". Generally, GC are personal attitudes reflecting human contribution to the society and devotion to the conservation of natural resources (Lee, 2009). They are perceived as crucial antecedents to the development of green and cooperative behaviors (Pinzone et al., 2016).

Subramanian et al. (2015) differentiate between natural green competencies (NGC) and acquired green competencies (AGC). The combination of NGC and AGC constitutes the effective green competency (EGC). Based on Roberts' (1997) competencies' framework, NGC⁵ are described as underlying traits derived from individual observations, whereas AGC⁶ are perceived as green knowledge and skills accumulated through experience. The results reveal that AGC are stronger predictors of green performance than NGC and have a higher influence on the initiation of GB. Hence, HR managers might focus on identifying employees with AGC and offer green workshops and training to develop AGC with the aim of accelerating sustainable development processes (Subramanian et al., 2015). The identification of procedures for building acquired knowledge for sustainable performances and the examination of strategies for inducing AGC may be promising lines for future research. Green training materials and instructions need to be created and adopted by scholars to facilitate green practices and the successful accomplishment of SDGs.

4.2.1.3. Green values (GV). In addition to GB and GC, the convergence of individual and organizational values and the compatibility of leadership traits with the work environment are predictors of SHRM. Leadership styles have been analyzed in the literature to indicate which types initiate sustainable development and assist in the implementation of SHRM. Robertson and Barling (2013) found that transformational leadership plays the role of a "catalyst" in promoting employees' pro-social behaviors. For instance, actively sharing environmental values, addressing sustainable issues, and encouraging employees to take part in social events are aspects positively associated with proactive

⁵ NGC, described as individuals' underlying traits and dimensions, are derived from observations and mentoring received during the formative stages of green behavior (immediate social group interaction and networking).

⁶ AGC are green knowledge and skills, developed through the accumulation of previous individual experiences on environmental issues, which strengthen the commitment toward behaving in an eco-friendly manner.

Table 2
Conceptualization of SHRM.

Authors & Year	Findings	Gaps & Issues for Future Research
Boudreau and Ramstad (2005)	Paradigm shift toward talentship and sustainability: the HC Bridge Decision Framework composed of efficiency, effectiveness, and impact.	Unclear view of the implication of talents in the shifting process and the evaluation of the strategic success.
Jabour and Santos (2008)	Multidimensional model linking HRM and organizational sustainability through: innovation management, cultural diversity and continuous improvement of environmental management.	Further investigation, using survey design in order to enhance the robustness of the results. Variables to be included: company size, industry, and country.
Jackson and Seo (2010)	Presentation of a list of questions in the greening of strategic HRM for scholarships and identification of barriers facing sustainability development: apathy, complexity, confusing terminology, and careerism.	Assessing the intersection between HRM and environmental sustainability as an opportunity to address a real world's problem connecting HRM to other disciplines by creating knowledge at multilevel complexities.
Renwick et al. (2013)	Based on AMO theory, a conceptual review providing clear evidence supporting the positive impact of employee involvement EI and environmental management EM.	Lack of research differentiating effective and ineffective EI initiatives; impact of EM on selection criteria and selection process; personality and antecedents of green leadership; role of emotions in EM; knowledge of the motivation of employees to becoming involved in EM via performance appraisal and reward management systems; impact of GHRM as a whole on environmental outcomes; research gap of the Asian economic development.
Taylor et al. (2012)	Review of five articles clarifying the role of HRM as a means to achieve sustainability strategies, and highlighting new areas to be explored by scholars and practitioners.	Novel HRM approaches and practices in companies experimenting with new governance structures; need for empirical studies that examine the link between strategic approach to sustainability and the way a company designs its HRM systems; industry type; new conceptualization of HRM and identification of the best outcomes of SHRM for employees and firms.
Scully-Russ (2012)	Three HRD models: strategic, critical and holistic; model of social change and learning from within based on three conclusions: need for a practice-based approach, engagement in the organizational micro-interactions, and metaphysical orientation including issues of power and ethical choices	Conceptual paper; models need to be supported empirically; what are the motives for doing good? And what is good?
Florea et al., 2012	Relating employees' values and organizational sustainability; intrinsic factors of employees' mindset are due to organizational actions and identification of values, and their relation to effective HRM practices.	Inventory of all the values that might impact organizational sustainability; inclusion of two constructs: organizational culture, and organizational structure.
Devins and Gold (2014)	Sustainable Talent Management and Development STMD as a tool to understand ecosystem skills by moving toward pluralist, collective and multi-voiced approaches to improving sustainable development.	Conceptualization and measurement of talents; role of STMD in small organizations; uncovering of "hidden knowledge" through STMD.
Kramar (2014)	Differentiation between SHRM and strategic HRM; generation of two models: adapted and extended from Ehnert (2009), acknowledging both negative and positive results for different stakeholders and factors influencing implementation of HR policies.	Creation of appropriate measures for individual organization and cascaded down to all employees (design, performance indicators and rewards); shift from knowledge development to integrating the findings into practical implications in the workplace.
Russ-Eft (2014)	Building a theoretical model connecting HRD with program evaluation leading to sustainable HRD programs; evaluation as a learning opportunity.	Development of instruments or assessment tools measuring the effect of the external and internal findings identified in the study; cultural and international applicability of the model.
Renwick et al. (2015)	Contemporary literature on GHRM based on AMO theory; Agenda for future research.	Research to assess job candidates' understanding of company environmental credentials (green job descriptions); PMA metrics to understand employees' accountability for EM performance; effect of green training on employees' behaviors, environmental outcomes, and evaluation of green learning; HR managers' role in ES; determinants of EGB; individual traits; HRM practices for implementing ES; empirical investigation of green work-life balance; Marxist social and employment relations theory for understanding Trade Union behavior.

behaviors (Ramus, 2002; Robertson and Barling, 2013). In the same vein, Florea et al. (2012) investigate the relationship between values and sustainability, and conclude that altruism, empathy, positive norm of reciprocity, and private self-effacement have significant impact on effective HR practices and the advancement of sustainability management.

At a micro level, GV, GB, and GC are associated with a higher predisposition toward engagement, involvement, and participation in communal activities. These individual traits are antecedents of SHRM that induce positive outcomes and are achieved in a gradual manner: that is, they start from personal initiatives, are executed and expanded in the organizational framework, and eventually help to create a better environment.

4.2.2. Green HRM, collectivist identity, and organizational culture

Both employers and employees pay attention to green attributes and the protection of environmental resources (Renwick et al., 2015). Employers are implementing green practices such as "employee branding" to improve the hiring process and to create a more responsible and environmentally aware workforce (Renwick et al., 2013, p. 2). An interconnected organization-employee fit facilitates the progress of SHRM. Here, we describe how these organizational antecedents of SHRM are recognized as drivers of the "greening" process of organizations.

4.2.2.1. Green HRM. The HR functions are complementary and interrelated tasks, incorporated in order to reach social and financial goals. Knowledge management, communication, and HR planning are predictors of the greening process. Cohesiveness and shared-interest among HR members are focal components for sustainable development. The support and contribution of HR practices are fundamental for achieving organizational greening (Jabbour and Jabbour, 2016).

Green recruitment and selection help to advance sustainable performance, by featuring green criteria in the job description and by informing the candidates about the organization's mission and values. It is the preliminary step of the HR department to match the "green" values of the employees and the firm. As regards training and development, HR managers rely on this key task to foster green competencies and green talents. Pro-environmental attitudes require the development of green teams (Jabbour et al., 2013) and green skills (Fernandez et al., 2003) to increase participation in social and ecological activities. Establishing a learning system, providing extensive workshops (Hale, 1995) and encouraging volunteering activities are strategies used by green training units to accomplish SDGs. Scholars emphasize the importance of raising awareness of environmental management and developing educational programs to improve the use of innovation and technologies (Hale, 1995; Unnikrishnan and Hegde, 2007; Venselaar, 1995). Practical workshops and on-site training should be customized to the corporate strategy and type of industry (Venselaar, 1995).

Unnikrishnan and Hegde (2007) provide evidence in support of in-house and on-job training, finding them to be more efficient and effective learning tools for sustainable adoption. The aforementioned practices lead to a twofold benefit at both individual and societal levels and enhance employees' consciousness and knowledge of SDGs. According to Jabbour et al. (2010), sustainability development is an evolutionary process of environmental learning management. Hence, to ensure the consistency of green training, organizations should detect needs among employees and assess their readiness to adopt sustainable practices (Zibarras and Coan, 2015).

As for boosting employees' motivation to implement sustainable practices, this managerial aspect is accomplished through green performance appraisal and reward systems. Renwick et al. (2013) confirm that environmental rewards and recognition have a significant and positive influence on employees' willingness to participate in eco-initiatives. While regular performance appraisal relates to employees' evaluation with regard to job description and work-related tasks, green performance appraisal is based on employees' commitment to green issues, evaluating whether they exhibit extra-social behavior, pay attention to resource consumption, and show a responsible attitude toward the environment. The customization of rewards and benefits depends on the individualized demands and needs, taking into account the type of industry and sector. Wagner (2013) empirically proves the existence of positive correlation between environment management systems (EMS) and HR practices. He concludes that work satisfaction is a stronger driver of EMS implementation than employees' recruitment/retention factor. For their part, Jabbour et al. (2013) indicate that organizations with intensive green team activities tend to show higher EMS performance.

Zibarras and Coan (2015) argue that reward systems and environmental training are keystones for enhancing environmental sustainability and encouraging proactive behaviors. Jackson et al. (2011), among others, stress that social compensations and public rewards are more effective than monetary and private rewards, and that negative appraisal techniques and punishments have adverse effects on environmental advancement. Personalized and intrinsic reward systems show a higher influence on SDGs and environmental management, since the valuation of the reward may vary among employees (Fernandez et al., 2003; Govindarajulu and Daily, 2004).

4.2.2.2. Collectivist identity (CI). At the macro level, some organizational antecedents of sustainable management (i.e. organizational identity, firm structure, and stakeholder pressure) have recently been investigated in HR and environmental studies. Using a sample of Chinese manufacturing companies, Li et al. (2012) conducted an empirical analysis on the relationship between firm's identity, HRM performance, and sustainable development. The authors assess the impact of three types of organizational orientation – individualistic, relational, and collectivist – on performance. Both collectivist and relational orientations of firms have direct and moderating effects on sustainable performance. CI positively moderates the relationship between HRM performance and sustainability, while relational orientation has a negative direct effect on sustainable performance. Accordingly, collectivist firms tend to be more socially responsible and exhibit higher involvement in moral activities with regard to the general benefit of the society and the ecosystem. However, the authors acknowledge that these results cannot be extrapolated to other countries, as China is a country where connections and business relations are crucial in the corporate operations and where little attention is paid to environmental protection. It seems that these practices were justified by the strong relationship between the government and organizations, which might mitigate the punishments imposed on social and ecological abuses. This leniency towards firms might be regarded as favoritism, and may slow down the advancement of SDGs. Several political regimes and governmental-corporate ties are negatively influencing sustainability and harming the environment,

causing corruption-related practices and inducing a lack of transparency between business agents and policy regulators. As a consequence, additional attention and intervention from external auditors and inspectors is required to control and evaluate the sustainable implementation across industries.

4.2.2.3. Organizational culture (OC). To increase environmental management opportunities, scholars recommend that HR departments encourage employees' relationships, engagement and involvement, and build a supportive organizational culture that promotes SDGs. Hence, instead of a superficial and occasional collection of employees' opinions and perceptions of environmental matters, a more organized and extensive commitment is needed. The results reveal that employees' involvement improves environmental management by efficient resource usage (Florida and Davison, 2001), waste reduction (May and Flannery, 1995), and workplace pollution minimization (Denton, 1999; Kitazawa and Sarkis, 2000). Del Brio et al. (2007) identify four HR factors for generating environmental action-based competitive advantages at the individual, managerial and organizational levels. Their figures indicate that the contributions to ecological performance of environmental managerial involvement, strategic integration of environmental organizational management, employees' motivation, and involvement in environmental activities amount to 16%, 8%, 8% and 10% respectively. The highest contribution to environmental practices is achieved by accommodating an organizational culture of involvement, participation and engagement. This organizational indicator can produce a synergetic effect on both the implementation process and the yield of social performance. In this context, Bunge et al. (1996) state that participatory culture is an important antecedent of social and ecological practices, and find a positive and significant correlation between environmental issues and the participatory organizational atmosphere. This culture entails the incorporation of waste reduction techniques through employees' participation and a formal engagement to guaranteeing effective green outcomes.

According to Dubois and Dubois (2012), to achieve successful SDGs, organizations need to embed changes at various levels. The effort should be exerted inter- and intra- organizationally through the adoption of sustainable visions and strategies, the development of moral behaviors and attitudes, and the establishment of the organization's social systems. Proactive leadership, innovative culture, flexible structure, and transparent reporting facilitate environmental sustainability (Ramus and Steger, 2000). An innovative culture is built on employees' creativity and fair treatment among workers, novel technological schemes, de-centralization, and horizontal communication with inter-dependent relationships. Witjes et al., (2017, p. 136) investigate the impact of three levels of organizational culture on corporate sustainability: at the "surface level", accomplished through artifacts; at the "value level", achieved through shared norms and beliefs among individuals, teams, and firms; and at the "underlying level", by adopting principles that reflect the interconnectedness between humans and the eco-system. They conclude that organizational culture should combine the three levels to integrate sustainable development. A summary of the antecedents of SHRM is provided in Table 3.

4.3. Outcomes of SHRM

4.3.1. Benefits of Green performance

After identifying the antecedents of SHRM, this section explores its various outcomes. First of all, adopting SHRM is perceived as a signaling factor of the firm satisfying shareholders' standards from different perspectives (O'Donohue and Torugsa, 2015; Renwick et al., 2013). On the one hand, SHRM may be a successful tool to attain both financial and social targets; and on the other, organizations are implementing this new approach as a response to external pressure exerted by government and regulatory agents, public and private communities, and consumers and customers. In this regard, Gholami et al.,

Table 3
Antecedents of SHRM.

Authors & year	Findings	Gaps & Issues for Future Research
Del Brio et al. (2007)	Human factors are key to successful environmental activities in firms; positive impact of employees' motivation, management involvement and strategic integration on achieving environmental action-based competitive advantage.	Joint influence of human factors such as other facets of the firm (suppliers, clients, R&D activities) on environmental performance.
Jabbour et al. (2010)	Model of evolution of the HRM contribution to environmental management in case studies: through systematic contribution and rewards dimensions; demand for environmental learning management.	Comparative case studies of small and large companies
Dubois and Dubois (2012)	Recommendation of a list of both transformational and traditional HR functions for design and implementation to facilitate the embeddedness of Environmental Sustainability ES initiatives; the degree of organizational commitment toward embedding ES determines the impact of HRM.	Generalization from specific behavior changes to the wide range of relevant behaviors; positive deviance on ES behavior change for both organizational and employee levels.
Li et al., 2012	Moderating effect of organizational identity on sustainable performance (SP); collectivist orientation and SP are positively correlated; relational orientation and SP are negatively correlated; firm size and SP are positively correlated	Comprehensive measurement of sustainable performance (separating environmental performance and donations) to test the effect of collectivist identity.
Ji et al. (2012)	Positive direct effect of employee training on firm's performance in sustainable development; evidence supporting the relationship between firm's environment attitude and its performance.	Assessment of firm's sustainability performance: differentiation between environment preservation and donation, charity, and educational activities.
Harvey et al. (2013)	Direct effect of HRM: hard HRM, performance management system and training; Indirect effect of HRM: soft HRM, job satisfaction, commitment and involvement.	Duplicate study in other industries; Complexity of managing employment relationship under increased pressure and enabling employees to meet range of targets that might be contradictory.
Wagner (2013)	Positive relationship between EMS implementation, work satisfaction and recruitment and staff benefits; work satisfaction benefits are strong predictors of EMS; increased interrelation between EMS and work satisfaction as a driver for strategic integration of sustainability-related issues.	Causal model integrating different disciplines such as psychology, sociology and management theory; integrating individual and firm level analyses; indirect effect of integrating HR and EMS.
Norton et al. (2015)	Comprehensive perspective on required and voluntary employees' green behaviors; EGB, antecedents, moderating and mediating factors; conceptual multi-level framework based on person-environment, job performance and motivational perspectives.	Identification of personal and contextual antecedents; influence of EGB and EGB effect on employees, coworkers, teams and leaders; cross-level processes. Assessment of contextual factors at institutional, organizational, leader and team levels.
Zibarras and Coan (2015)	Larger organizations have higher HR implementation in relation to team, organization-based and individual incentives. Transformational leadership transfers environmental values, models desirable behaviors and motivates employees. Importance of the vision and mission of the organization toward pro-environmental behaviors; a cultural shift promoting sense of belonging to community.	Quantitative evaluation of HRM practices on successful EMS implementation; exploration of the specific role of HR managers in the implementation of these practices; analysis of the perspective of all employees; investigation of the factors that contribute the most to make green HRM a success; differentiation between green and non-green practices.
Subramanian et al. (2015)	AGC positively related with individual GC and green behavior; AGC as an enhancer of individual green performance.	Influence of competencies on green culture and performance; BRIC nations (Brazil, Russia, India, and China).

2016 and Renwick et al. (2013) conclude that SHRM positively impacts financial goals, employees' well-being, and collective organizational objectives. More specifically, Gully et al. (2013) point out the positive impact of green recruitment and training on sustainability performance. Their model clarifies the "role of desire for significant impact" investigating the effect of the company's environmental responsibility values on the "person-organization" fit, organizational attraction, and job pursuit intentions. The results highlight the importance of recruitment advertisements, specifically through communicating the firm's social and environmental engagement. Recruitment advertisements have an impact on job seekers' perceptions of the "person-organization" fit, which has a positive association with the organization's attractiveness. The outcome of the individual-firm matching is the maximization of the overall utility and interest for both employees and the organization.

Environmental performance is on the agenda of sustainability management leaders, CEOs, and top management teams. According to Judge and Douglas (1998), it reflects the "firm's effectiveness in meeting society's expectations with respect to concern for the natural environment". Among the measures applied to evaluate green performance are waste reduction, pollution management, and recycling activities (Lober, 1996). Paillé et al., 2014 argue that SHRM contributes to improving green performance through staff and organizational support, and has both direct and indirect effects on the company and the labor force. The direct effect of HRM is reflected by policies and practices influencing workers' behavior through performance management systems (rewarding and penalizing); whereas its indirect effect is seen in the promotion of organizational commitment, job satisfaction, and

employees' involvement (Harvey et al., 2013). At the firm level, Guerci et al. (2015) differentiate three types of organizational climate: benevolent, principled, and egoistic. According to Martin and Cullen (2006), the egoistic climate elicits behaviors based on self-interest, maximizing personal utility, and organizational profit. In a benevolent climate, the well-being of others is the motivation underlying humanistic behaviors; thus, employees tend to act based on the utilitarian view, boosting the overall good. In contrast, the principled climate induces behaviors grounded by formal and informal "rules and norms of conduct" (Guerci et al., 2015, p. 327). To support their arguments, Guerci et al. (2015) apply the AMO theory and find that ability-enhancing practices (i.e., recruiting, selection, and training) and opportunity-enhancing practices (i.e., job design and employee involvement) have a positive influence in benevolent and principled climates. In contrast, motivation-enhancing practices have a positive impact in egoistic climates and negative effect in principled climates. The authors conclude that the HRM system influences the firm's ethical climates. Therefore, analyzing the link between a company's orientation and sustainability performance is crucial to expanding the effect of SHRM on organizational ethical climates (Guerci et al., 2015, p. 337).

Summing up, the result of SHRM at the firm level is the generation of a decent climate and a transparent culture considered as the foundation of a virtuous green cycle able to promote SDGs. The integration of sustainability at the organizational level is perceived as an intermediate indicator between the individual and the environment. From one perspective, it creates a necessary milieu for initiating the development of employees' characteristics to behave in a socially and environmentally responsible way toward the firm; but from another, it

contributes to establishing an interconnected society and a protected environment.

One of the leading sectors in sustainable development is hospitality management and tourism. The nature of this sector triggers the merge of social achievement and managerial operations such as cost minimization, waste management, employees' engagement, the firm's reputation, and fulfillment of customer value. Several certifications, training programs and licensed qualifications have been developed to legally classify hotels and firms as sustainable organisms (Rodríguez-Antón et al., 2012). The literature indicates that HR practices are the factors that contribute to making hotels "green", transforming the hospitality management industry into a socially responsible sector. Scholars identify three types of motivations for the initiation of green practices: regulatory and community pressure (Chan and Wong, 2006; Kirk, 1998, 1995; Tzschentke et al., 2004), financial benefits (González and León, 2001; Iwanowski and Rushmore, 1994) and positive public image (Claver-Cortés et al., 2007; Kirk, 1998, 1995; Tzschentke et al., 2004). Rodríguez-Antón et al., 2012 distinguish three elements influencing sustainability incorporation in the Spanish hospitality field: the hotel's classification, market style (independent versus hotel chain) and customer type. They conclude that low category and chain hotels with leisure clientele tend to show higher involvement in environmental issues, while hotels with a business clientele are more dedicated to employees' health and performance, focusing on reducing costs, avoiding absenteeism, and maximizing productivity.

Exploring SHRM and overall performance in greater depth, Kim and Choi (2013) examine green practices from the employees' perspective. At the individual level, employees do not perceive overall sustainable performance as an important issue, a position that indicates a lack of awareness and consciousness of the organizational objectives in regard to SDGs and the benefit of green implementation at the firm and environmental levels. Hence, the top management team plays a central role in delivering green training and workshops, and in informing employees about SDGs and green practices. Kim and Choi (2013) stress the positive association between the perception of green strategies and employees' commitment. To increase employees' identification with their jobs and to reduce staff turnover, companies are encouraged to engage regularly in SDGs and green management. Hence, the benefits of these practices can be recognized as a win-win situation for employees, corporations, and the environment, enhancing overall harmony inside and outside the organization.

4.3.2. SHRM: from a cross-national perspective

To provide a broader perspective, some studies have adopted a cross-national approach to global green performance, implementation, and outcomes. They consider whether HR strategies differ across countries and test whether the similarities in SHRM practices outweigh the differences. The aim is to determine to what extent a combined vision of the interrelation between HR and sustainability can be acknowledged at international level. Dogle and Holtburgge, 2013 examine the link between corporate environmental responsibilities (CER), the employer's reputation, and employees' commitment in multinational companies (MNC) operating in developed (Germany and the US) and emerging (China and India) economies. The findings do not reveal any drastic differences in CER according to the level of economic development: "green strategy & culture, green products & technologies, and green recruitment & evaluation" are positively correlated with organizational reputation in both types of economies (Dogle and Holtburgge, 2013, p. 1754; Dogle and Holtburgge, 2013, p. 1754). However, for green communication, companies in developed economies have "rule-based" operations, while in emerging economies they have "relationship-based" operations. Thus, in Germany and the US, green communication is positively associated with the firm's reputation as a consequence of the monitoring of environmental reporting by external regulators and auditors. Comparing green practices across the economic markets, they do not reflect

any significant influence on the signaling effect of CER. These results suggest that due to globalization, firms' culture and values are converging toward one social paradigm that reduces national differences in business performance. In the same vein, Ehnert et al. (2015) compare liberal market economies (LME) and coordinated market economies (CME). LME (English-speaking countries such as the US, UK, Australia, Canada and New Zealand) are shareholder-driven and associated with long-term shareholder pressure, while CME (such as northern Europe and Japan) are stakeholder-driven and associated with short-term shareholder pressure. The authors observe that the differences in sustainable performance between MNC from LME and CME are not significant. They mention that in the sample selected in the study, organizations report equally on sustainability activities for both "green matters" as an operational consideration and "people matters" as an employee consideration. However, the social disclosures are more focused on internal indicators of sustainable performance than on external ones. The authors conclude that the world's largest firms tend to report more on "decent work" as an intra-organizational factor in developed countries than on societal factors such as "human rights" in developing countries (Ehnert et al., 2015, p. 100–101). This might be the consequence of a lack or misapplication of HR policies and regulations endorsing sustainable and green matters. Reflecting upon these results, integrating both internal and external social responsibilities within HR tasks might be a "signaling attribute" to maintain successful business and to achieve SDGs. Hence, organizations with green HR functions tend to develop a sustained competitive advantage perceived by various business and social agents as an added value between competing firms.

Haddock-Millar et al. (2016) conduct a comparative case study in the food industry assessing SHRM in MNC with subsidiaries in the UK, Germany, and Sweden. They focus on the various positioning and implementation strategies of environmental performances in different departments of the firm. In the UK, the HR division plays the major role in sustainability development; in Sweden, societal responsibilities move from supply chain departments to communication teams; whereas in Germany, the environmental management tasks are part of the corporate social responsibility agenda. Only limited companies in the UK and Sweden implement the "Green Champion" initiative, defined as "specialist knowledge and people with energy, passion, persistence, and right attitude toward the environment" (Haddock-Millar et al., 2016, p. 205). As for the similarities across MNC subsidiaries, they reflect a commitment to environmental sustainability, but also reveal a scarcity of indicators enabling the firm to improve its ecological performance (Haddock-Millar et al., 2016; Paillé et al., 2014). Despite some minor discrepancies in green implementation techniques, the inclusion of eco-friendly practices and operationalization of sustainable performance (i.e., the enhancement of employees' welfare, brand image of the company, and offering sustainable benefits to customers) are becoming commonplace in many countries. At a cross-national level, the end result of SHRM is to generate an opportunity for organizations to perform in a better environment. As mentioned above, the globalization paradigm minimizes the differences between SHRM schemes in developing and developed economies. The distinctive practices that vary among countries are the assignment of the department in charge of SDGs and the strategic prioritization of the sustainable agenda among the workforce, society, and the environment. A summary of the outcomes of SHRM is provided in Table 4.

To summarize these findings, several drivers of SHRM are identified as fundamental tasks of HR: Green recruitment is achieved by selecting socially responsible employees who not only enhance the firm's profitability, but also achieve benefits in the overall environment; Green training is applied through continuous environmental learning and development of knowledge, skills and competencies promoting socially and eco-friendly behaviors and attitudes; employees' green performance is appraised and rewarded in relation to their ethical and civic engagement and participation in intra- and inter-organizational

Table 4
Outcomes of SHRM.

Authors & year	Findings	Gaps & Issues for Future Research
Gully et al. (2013)	Communicating firm’s social and environmental engagement has an impact on job seekers’ perception of the organization by influencing the person-organization fit; this has a positive link to the organization’s attractiveness for job applicants.	Replication studies in different job contexts; identification of additional factors influencing organizational attractiveness.
Guerci et al. (2015)	Ability-enhancing practices and opportunity-enhancing practices are positively related to benevolent and principled ethical organizational climates; motivation-enhancing practices are positively related to egoistic climate; sustainability as a key factor to balance green HRM practices and ethical climates.	Cause-effect relationship between HRM practices and ethical climate; longitudinal study to clarify the interventions for establishing positive ethical climates; other countries and different institutional settings.
Guerci and Pedrini, (2013)	Significant level of consensus between HR and sustainability managers; HR management is considered as a means and an end for developing corporate sustainability; sustainability practices may reinforce corporate HR by increasing employee sensitivity toward social issues; convergence between both trends; HR managers focus on development of competencies whereas sustainability managers focus on practice-related factors; they do not fully share the same vision.	Replication in different countries, firm sizes, industries; exploration of the perception of the contribution of HR to sustainability- driven change in different organizational actors such as trade unions, NGOs, and local communities; test of the impact of the consensus on the strength of HR management and on its effectiveness for sustainability-driven change.
Guerci and Carollo (2016)	HR practices are implemented by organizations for two reasons: to fulfill the explicit commercial requirements imposed by public administrations and to take advantage of public resources; eight paradoxes in the GHRM system: objectives, boundaries, formalization, standardization, promoting ability, motivation and opportunity, and role of HR managers.	Investigation of the association of organizational, institutional and cultural factors with green HRM paradoxes; a list of paradoxes perceived by other actors in the organization; identification of strategies to overcome HR related paradoxes.
Kim and Choi (2005)	Positive relationship between the perception of green strategies and employees’ commitment; green practices and win-win-win situations for employees, company and the environment.	Interaction of green perceptions and other antecedents; link between green practices and employees in the hotel industry: motivational factors, communication and design of green training.
O’Donohue and Torugsa (2015)	Moderating effect of GHRM between proactive environment management and financial performance in small firms; similar findings in large firms.	Quasi-experimental longitudinal study of causality and generalizability; multi-industry sample; further studies taking into account the role of employees in contributing to the effectiveness of proactive environment management in small firms.
Dogle and Holtburge (2013)	Green technology and products have the highest impact on environmental reputation, followed by green communication and green recruitment and evaluation; positive relationship between environmental reputation and employee commitment in developed economies more than in the emerging ones; cultural differences are less significant for the signaling effects of CER activities; globalization leads to a convergence of cultural values in the business context.	Assessment of the convergence of corporate governance systems and cross-national differences; other geographical areas; investigation of interaction between CER activities; affective, cognitive and behavioral processes of individual perception of CER activities.
Ehnert et al. (2015)	World’s largest organizations focus on internal dimensions of SHRM more than on the external ones; they report more on indicators of decent work; few international differences between MNC in LME and CME.	Lack of indicators to measure SHRM relevance; further combination of both qualitative and quantitative research to understand the international differences between countries or cultures in SHRM; need to redesign HR functions and operations for performance review to incorporate sustainability criteria; examination of the integration and coordination mechanisms between external and internal aspects of SHRM (for reporting); integration between SHRM and supply chain employment concern; focus on human rights of labor-related categories influencing employees in the supply chain.
Haddock-Millar et al. (2016)	Identification of similarities and differences in MNCs approaching GHRM in European context; differences in positioning and alignment of HR function and environmental objectives; both Sweden and the UK achieve the Green Champion position, though through different paradigms: in UK, managers have the leading role; whereas in Sweden, the frontline employees undertake the role toward achieving the Green Champion; Germany developed CSR strategic approach at senior head office level; an important innovation is the "shades of green" typology to reflect a spectrum of various level of environmental involvement.	Examination of strategic, operational and managerial roles in environment performance and the hierarchical influences of GHRM; demonstration of effective outcomes at employee level.

activities. Overall, green HRM functions intend to accommodate an innovative work-atmosphere aiming to fulfill both the interests of the individual and the collective objectives of the organization. The major outcomes of SHRM at the individual level are the involvement, commitment, engagement and retention of employees; at the firm level, its outcomes have an impact on the firm’s economic and financial performance, its reputation, and its attractiveness. In this context, these characteristics are perceived as sustained benefits that supporting the firm’s viability and credibility.

4.4. Barriers to SHRM implementation

The purpose of SHRM is to implement the recommended green practices but also to post-evaluate their effects on the corporate milieu. While most of the studies focus on the contents of sustainability, there is a need to underline the difficulties and challenges facing this

organizational development. Russ-Eft (2014, p. 553) classifies the barriers encountered by HR to implement sustainability into three categories: external factors (i.e., linking external partnerships, funding, and support of organizations); organizational factors (i.e., internal partnerships, the organization’s mission, and leadership); and program-specific factors (i.e., alignment of HR programs and organizational missions, administrative support, and developmental evaluation). In the same vein, Jackson and Seo (2010, p. 286–288) identify four sets of obstacles challenging SHRM: apathy, defined as lack of engagement and knowledge; skepticism and externalizing responsibilities; complexity in individual, organizational, political-economic, socio-cultural and ecological systems; and confusing terminology and a lack of consensus between researchers to attain a clearer conceptualization of sustainability and to favor career development and professional integrity. Furthermore, Stone (2000) categorizes the barriers to the adoption of sustainability in three dimensions: organizational, systematic, and

attitudinal. She explains that at organizational level, centralized decision-making, lack of employees' involvement, lack of recognition, and increased staff turnover slow the pace of sustainable execution. As for the systematic barriers, the absence of a transparent reporting system, lack of public disclosure, and poor developmental structure inhibit the implementation of sustainability. The attitudinal obstacles include a lack of supportive culture and effective leadership, job insecurity, and resistance to change in the labor force. Combining the two paradigms of organizational change theory and change management theory, HR managers can overcome these difficulties by identifying the sources of the barriers and incorporating suitable strategies to resolve these operational issues.

From the same perspective, [Guerci and Carollo \(2016\)](#) conceptually examine the paradoxical aspect of SHRM, identifying six main issues to be addressed in future research: formalization, standardization, promoting ability, motivation, opportunity, and the role of HR managers. These challenges in SHRM operationalization illustrate the ambiguity and complexity of this framework. [Guerci and Pedrini \(2013\)](#) stress the lack of agreement between HR managers and sustainability managers: while HR managers focus on “competency-related” developments such as sustainability-driven change processes, sustainable managers consider that “practice-related” factors are more important for societal performance. The solution proposed for overcoming the difficulties in achieving SHRM is to achieve consensus between sustainability and HR executives in order to build integrative and cooperative teamwork systems for attaining common organizational visions and goals.

5. Discussion

This article investigates the link between SHRM and sustainable performance and identifies the HR practices that can contribute to the attainment of SDGs. It reviews the antecedents and outcomes of SHRM at individual, organizational, and cross-national levels. Through green recruitment and selection,⁷ green training and development,⁸ green performance appraisal and rewards,⁹ and green implementation and practices,¹⁰ SHRM is considered as a key area for monitoring the use of natural resources and introducing SDGs in all organizational domains ([Taylor et al., 2012](#)). Furthermore, HRM is a humanistic tradition that leaves behind the classical view of firms as exclusively maximizing economic output and reducing costs ([Jabbour and Santos, 2008](#)). SHRM takes into consideration the influence of internal and external factors such as social and environmental policies and regulations, governmental and community pressures, consumers' needs, and employees' welfare ([Lucio and Stuart, 2011](#)).

The main findings of this systematic literature review are the generation of an integrative model of SHRM and the formulation of four propositions. Regarding the model, SHRM entails three main practices: the involvement of the human capital in societal activities, efficient and effective management of natural resource allocation and consumption, and the stimulation of a certain level of awareness and responsibility among both individuals and organizations. At the micro level, green characteristics comprise voluntary green behaviors, acquired green

competencies, and green values, which are perceived as drivers of sustainable performance. Once these antecedents are identified at the employee level, the transformation of the organization in order to attain SDGs becomes more feasible. At the firm level, the predictors of sustainability include: implementation of green HR functions, promotion of a collectivistic organizational identity, and the establishment of a supportive and transparent organizational culture. At a cross-national level, the globalization factor influences sustainable development by inducing a unified paradigm of social and eco-friendly practices that elicit a convergence of corporate performances. Despite a slight deviation in the application of green strategies across economic market structures (i.e., the liberal market and the coordinated market) and between developed and developing countries, sustainable practices reveal positive effects not only on social achievements but on financial performance as well.

The diagram below summarizes the results of the literature review by linking together the findings of the content analysis ([Fig.1](#)).

As a result of this review, we are able to formulate four propositions, which can be empirically tested and validated in future studies:

Proposition 1. Combining Social Learning Theory and Parson's Social System Theory creates the Collective Sustainability Theory, which establishes a conceptual foundation to explain the “greening” process of organizations.

Proposition 2. Employees with higher green values such as altruism, empathy and self-effacement tend to acquire green competencies easily; these competencies are perceived as activators of green behaviors. This enhances employees' green attitudes and contributes to the attainment SDGs 8 (decent work and economic growth) and 10 (reduce inequality at work).

Proposition 3. Green training and role rotation addressed by SHRM are essential tools to generate green competencies, which in return facilitate the implementation of SDGs. Continuous environmental training and workshops increase employees' awareness and develop the green skills needed to achieve SDG 12 (responsible resource consumption and production).

Proposition 4. Leadership style and personality traits are interconnected with the establishment of a green organizational culture and the attainment of SDGs. Leaders and managers are responsible for boosting a collective and ethical atmosphere among workers to attain SDG 8 (decent work and economic growth).

6. Conclusion

Competitiveness, legitimacy, and ecological responsibility are the motives that underlie organizational change ([Bansal and Roth, 2000](#)). This transformation is described as a paradigm shift toward “green” management and a metamorphosis generating dual objectives at social and financial levels ([Harris and Tregidga, 2012](#)). While most HRM studies address one level of analysis, this article adopts a multi-dimensional approach. The contribution of this review is to provide an in-depth analysis of each attribute of sustainable development at different levels (individual, organization and national). The study summarizes various conceptual and empirical findings, provides a clear definition of all green HR functions, identifies certain research gaps in the literature, and examines the impact of SHRM on the three pillars of sustainability: economic, social and environmental.

The outcome of this review is a reflection on two main dimensions: research and practice. In the research area, although sustainable development is becoming increasingly articulated, agreement among scholars is still a necessity in order to develop the SHRM paradigm further. Various theoretical frameworks are presented in the literature, but there is still a lack of a “combined” theory explaining the whole phenomenon from socio-economic and behavioral perspectives. As for

⁷ We provide the following definitions for each SHRM function: Green recruitment and selection are based on “green job descriptions”, where candidates are hired depending on their social and ethical qualifications.

⁸ Green training and development consist of providing “green workshops” in order to enhance employees' knowledge, skills, and competencies toward social and ethical matters.

⁹ Green performance appraisal reflects employees' evaluations based not only on their job-related duties, but also on extra-role behavior and engagement in internal and external volunteering activities.

¹⁰ Green implementation and practices consist of the continuous follow-up of green decision-making process and sustainable strategies adopted, as well as their post-implementation evaluation at the levels of both employee and firm performance for financial, social and environmental outcomes

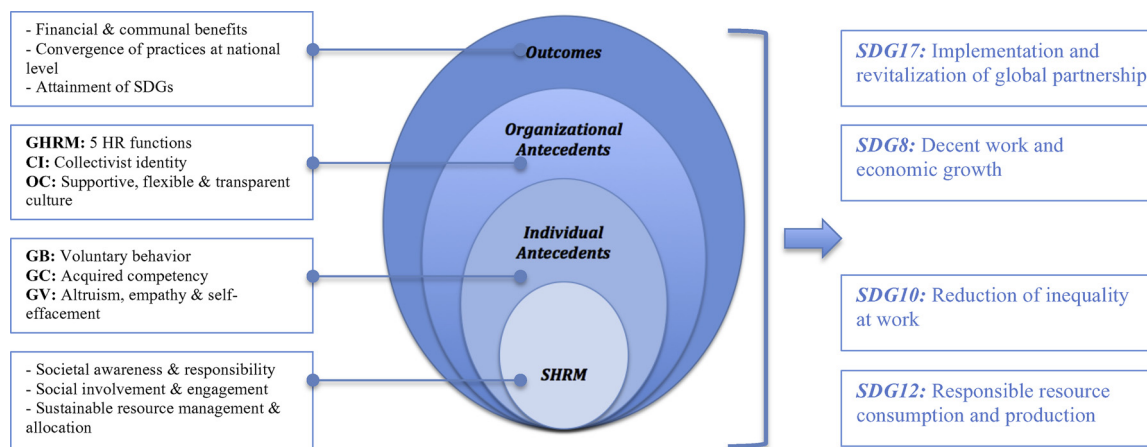


Fig. 1. Integrative Model of SHRM.

the practical implications, the benefits of green organizations for governments, social communities, and customers are clearly defined; however, the added value of this transformation at the employee level is still not well established in the business field, and in particular for trade unions. Although some studies claim that SHRM is positive for employees' well-being (and in fact employees are the dynamic factor contributing to this organizational change) there is still a lack of HR policies backing up SDGs. This fact triggers a certain skepticism about the motives of green organizations, which leads to a reflection on the following question: is the "greening of organizations" an obligation embedded in the system, or a step further toward social cohesiveness and environmental protection?

Further conceptual and empirical studies are necessary to make further advances in the SHRM field. In particular, an evaluative tool should be developed to measure the post-implementation outcome of SHRM. This tool could be used to assess the advantages of sustainability, to monitor its impact on natural resource consumption, and to determine the value of this organizational transformation. Focusing on the methodological framework, quantitative research and more precisely longitudinal studies estimating the effects of SHRM on various divisions of the firm might be replicated, taking into consideration different samples and contexts (demographics, culture, industry and sector) to provide the most meaningful results. In this vein, a multi-disciplinary study connecting managerial paradigms of SHRM, CEOs and board of directors' structure and composition could help to address the effects of SHRM and corporate governance on financial performance, risk assessment, and tax alleviation. In addition, the HR literature lacks experimental studies assessing the causal relationships between SHRM and features of sustainability. For instance, the research design is considered as an opportunity for future studies to identify the existence of a cause-effect relationship between green competencies and green behaviors for inducing sustainable performance. From a conceptual perspective, there is a need to mitigate the ambiguity and complexity of the concept of sustainability in general, and of SHRM in particular. Generating a new theory based on Bandura's Social Learning Theory and Parson's Social System Theory might help to explain the transformation of organizations – that is, from an initial commitment to a green philosophy at individual level to a collective responsibility toward the attainment of SDGs.

The main limitation of this study is the small sample of articles included, due to the novelty of the topic. However, the review reflects and associates major findings from different perspectives. The content analysis clarifies the link between various components of SHRM and SDGs. Another shortcoming is the fact that it is a qualitative review; integrating empirical and statistical data should provide further evidence on how SHRM contributes to the creation of "green" organizations.

Disclosure statement

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¹¹ The references marked "*" are the articles selected and assessed to build the content analysis of the study.

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