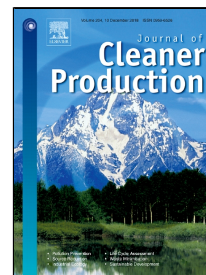


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Systematic Literature Review on Sustainable Human Resource Management

Janaina Macke, Denise Genari



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# Systematic Literature Review on Sustainable Human Resource Management

## Abstract

This study aims to analyze the state-of-the-art of sustainable human resources management and to identify key elements, trends and research gaps. A systematic literature review was carried out using Scopus database, covering the period from 2001 to 2018, which resulted in a corpus of 115 scientific articles. Data analysis occurred through content analysis tools and statistical processing of the abstracts by the Alceste software, version 2015. The results showed four categories, which comprise 74% of the elementary units of the corpus analyzed. The first comprised studies on sustainable leadership, based on individual and group power and embedded in its principles, processes, practices and organizational values. The second demonstrated the relationship among human resources management, environmental sustainability and organizational performance. The third category considered the tensions and paradoxes between human resources management practices and sustainability: on the one hand, human resources management should focus on cost reduction and corporate profitability (in the short-term); on the other, their actions should provide long-term sustainability of organizational performance. The last category dealt with the link between human resources management and the social dimension of sustainability, especially with regard to organizational social responsibility and the company's relationship with its stakeholders. In conclusion, this paper aims to contribute to the ongoing discussion on the topic of sustainable human resources management by analyzing the state of the art and future directions of human resources studies.

**Keywords:** Sustainable Human Resources Management, Sustainability, Social Responsibility, Sustainable Leadership, Systematic Literature Review.

## 1. Introduction

The management process in the business environment has been concentrated for a long time in the achievement of short term financial goals, ignoring broader long-term objectives linked to human issues (Maley, 2014). On the other hand, the popular awareness in relation to the economical environmental and social problems that can emerge from the business scenario contributed more for organizations to show their commitment to sustainability (Ehnert *et al.*, 2016). Moreover, the sustainable development in society is not possible without the sustainability assertion being present in the business world (Schaltegger *et al.*, 2012; Zink, 2014; Wagner, 2015).

It is noticed that there is an emerging concern in the academic sector for studies which focus on sustainability and the sustainable development (Linnenluecke and Griffiths, 2010). Although the number of researches has increased in recent years (Roca and Searcy, 2012), there are still divergencies on conceptual terms (Glavič and Lukman, 2007; Presley *et al.*, 2007; Lozano, 2008), once sustainability presents itself as part of various scientific subjects. Furthermore, the term eventually is applied only as a theoretical expression and with political means or as a “fad”, facts that detract from the real meaning of sustainability (Leal Filho, 2000).

Concurrently, for the last three decades, human resources have stood out for their business strategies importance (Jackson *et al.*, 2014; Kramar, 2014) and for their organizational performance leverage, through approaches on cost and revenue and the valuation in the economic interests of the shareholders and owners (Huselid *et al.*, 1997; Jackson and Seo, 2010).

However, the balance valuation among the perspective of environmental integrity, economic prosperity and social equality (Hahn and Figge, 2011; Aust *et al.*, 2015), originating the triple bottom line model (Elkington, 1987), leading to emerge from a new paradigm: the human resource sustainable management (Boudreau and Ramstad, 2005; Ehnert *et al.*, 2016). This approach acknowledges broader business results, including human and social aspects in management process (Mariappanadar, 2003; Ehnert, 2009b; Freitas *et al.*, 2011). It is not a conception excluding the strategic approach; however, it is a complementary approach (Kramar, 2014).

Sustainable management of human resources started to be discussed in the late nineties in Germany, Switzerland and Australia. A research by Müller-Christ and Remer (1999), Zaugg *et al.* (2001), Gollan (2000), Wilkinson *et al.* (2001) and Avery and Bergsteiner (2001) were decisive in the area. Those authors highlighted the importance of sustainability for the management of human resources based on previous studies on environmental management, human relations and corporate sustainability (Ehnert and Harry, 2012; Stefano *et al.*, 2017).

Currently, research on sustainability applied to the management of human resources is developed by different disciplines and research areas. Such studies focus on corporate sustainability, corporate social responsibility and sustainable work systems, which propose a different perspective respecting traditional concepts and practices of strategic management of human resources in the business environment. The sustainable management of human resources has multiple levels of analysis (effects on individuals, process management, organization and society), dimensions (economic, ecological, social and human) and different time perspectives (short and long term) (to be considered Ehnert *et al.*, 2013).

The relationship between sustainability and human resources management is pointed out as an innovative and emerging approach and a relevant gap to be filled. The intersection between sustainability and human resources management is based on two assumptions: the role of human resource management in promoting organizational sustainability (Cohen *et al.*, 2012; Ehnert *et al.*, 2013; Guerci and Pedrini, 2014) and the sustainability of human resources management processes (Mariappanadar, 2003; Ehnert, 2009b; Cohen *et al.*, 2012). In this sense, existing researches have had different goals and are based on different assumptions about the role of HRM in sustainability (Ehnert and Harry, 2012; Järlström *et al.*, 2016).

This paper examines the assumptions underlining the different ways concepts of sustainable human resource management have been used in organization studies, by assessing, through a systematic literature review, the state-of-the-art of human resources management and its key elements, trends and research gaps.

The systematic review of literature represents a method to synthesize a considerable amount of information, with the identification of the main characteristics of a given topic. This type of review also consists of a scientific investigation, which includes the comprehensive research of potentially relevant articles and the use of explicit and reproducible selection criteria (Tranfield; Smart, 2003; Petticrew; Roberts, 2006; Adams; Smart; Huff, 2017). Therefore, it facilitates the collection, evaluation and synthesis of results from multiple studies (Cook; Mulrow; Haynes, 1997) and the identification of research gaps (Kitchenham, 2004).

From now on, the present paper is structured as follows. Section 2 describes the method of the systematic literature review and the software used for data analysis (content analysis). Section 3 analyses the results and offers an interpretative framework of mapping the main dimensions on sustainable human resource management. Section 4 presents and overview on sustainable human resource management research. The conclusion reveals practical and theoretical insights obtained.

## 2. Method

The different conceptions of sustainable human resources management are reflected in the various nomenclatures currently being used. Despite the diversity of terminologies, they all recognize, implicitly or explicitly, the human and social perspectives of organizations and the impact that human resources have on the success and survival of companies (Kramar, 2014).

In order to analyze the studies that link sustainability and human resources management, the authors carried out a systematic literature review that aimed at identifying its main theoretical aspects and highlighting the main characteristics of the publications. The literature review is based on grounded theory (Wolfswinkel, Furtmueller and Wilderom, 2013), in order to enable the researchers to identify gaps in the field and to build a theoretical model based on the emerging results.

The process was developed based on the suggestions of Wolfswinkel, Furtmueller and Wilderom (2013), including five stages of literature review. The first one refers to the definitions, from the identification of the criteria of inclusion and exclusion of articles, from the fields of study, from the appropriate databases and from the specific terms of research. Subsequently, the effective search of the studies and the selection of the articles to be analyzed are carried out, in accordance with the objectives established for the research. Finally, the study sample should be analyzed and the main contents identified are structured and the results should be condensed and re-presented.

The definition of the terms for the database search was based on the study of Kramar (2014), which cites three categories of studies on SHRM:

- a) capability reproduction: a category of studies that focuses on economic aspects and the creation of sustainable competitive advantages, in addition to the internal impacts of human resources management policies, in economic and social / human terms;
- b) promoting social and environmental health: a category of studies that emphasizes the external and broader consequences of sustainable human resource management practices, addressing environmental, social and human outcomes;
- c) connections: a category of studies examining the interrelationships between managerial practices, including human resource management and organizational outcomes, which will in turn address environmental and social outcomes. This classification includes studies related to sustainable leadership and environmental sustainability.

A preliminary review defined searched terms in the following fields: title, abstract or keywords (Table 2), using the following keywords: “Sustainable HRM” OR “Sustainable Human Resource Management” OR “Sustainable Work System” OR “HR Sustainability” OR “Sustainable Management of HRs” OR “Sustainable Leadership” OR “Sustainability” AND “Human Resources Management” OR “Sustainable Organi\*” AND “Human Resource Management”. The authors chose the Scopus database as it is widely used in academic research. The search criterion included articles published in scientific journals of social sciences and humanities.

*{Table 2 about here}*

The keywords were applied to Scopus up to 20<sup>th</sup> of March 2018. A total of 225 publications were found. Exclusion criteria considered articles that did not address, in whole or in part, the theme of sustainable human resource management. The application of the exclusion criteria to these abstracts removed 110 documents, resulting in 115 eligible papers for full-text review. The whole process of selection followed Moher *et al.* (2010) and Petticrew and Roberts (2006) recommendations (Figure 1).

{Figure 1 about here}

Afterwards abstracts of selected studies were organized into specific files, in order to carry out an analysis of their content via the 2015 edition of Alceste software (Lexical Analysis of a Contextual Text Segments Set). This version allows a researcher to analyze interviews, literary works, articles, essays and other texts, in order to quantify and extract their most significant structures, i.e. their elementary context units (ECUs) (Illia *et al.*, 2014).

Alceste's method is known as Hierarchical Decreasing Classification (HDC). The corpus to be analyzed is successively split into chunks; the researcher then observes the distribution of the most significant words within every segment extracting the most representative words from the text. The software uses chi-square test to verify the association of context units into classes (Abitan and Krauth-Gruber, 2015). This can be achieved by the lemmatization process – by identifying the base form of a word and grouping these words together (Vallbé *et al.*, 2005).

The main results are presented through a dendrogram, which reveals the classes of words according to their semantic roots and a factorial analysis, which graphically represents the results by enhancing the similarities and dissimilarities of the classes (Illia *et al.*, 2014; Vallbé *et al.*, 2005). The software allows the automatic processing of a large volume of data, with the interference of a single researcher. This fact reduces the subjectivity that often occurs during the application of traditional content analysis and in the execution of codifications manually performed by an academic (Colucci and Montali, 2008).

One important advantage of using Alceste is that human bias is controlled, as human coding is guided by an explanatory report: the researcher analyzes quotations only once these have been identified as being either representative or not of a specific co-use of words. In other words, the researcher analyses quotations based on reports of how the language in each quotation is contrary or similar to the language used in other quotations (Illia *et al.*, 2014).

The abstracts were analyzed by the software Alceste, version 2015. The software considered these abstracts as Elemental Context Units (ECU), which are text segments composed of roots and their variations. A set of all ECUs constituted the research corpus, from which outputs were generated.

The Alceste software identifies quantitative, statistical relationships between different parts of the text. This procedure, as opposed to classical content analysis (in which the researcher first encodes, and then the software calculates quantities), allows to identify structures, recurrences, patterns in the text that have not necessarily been imagined a priori, which makes this type of analysis interesting even for researchers traditionally linked to purely interpretive approaches, such as discourse analysts and post-structuralists (Castelfranchi, 2017).

This is in line with grounded theory assumptions (Glaser, 1998), in many ways. First, the grounded theory aims to generate explanations about the phenomenon, with the least intervention of the researcher. In this way, the researcher should not force existing

presuppositions or theoretical concepts, but let the phenomenon unfold and the theory develop, from the emerging data. Second, the analytical methodology of grounded theory is based on quantitative inductive analysis, with the purpose of developing concepts, as well as the lemmatization process used in Alceste software (Vallbé *et al.*, 2005). And third, the grounded theory does not generate a formal theory, in the positivist sense, but a substantive theory. A substantive theory does not claim universality; it is specific to a particular group or phenomenon; it seeks to explain a “reality” made real by the subjects (Glaser, 1998; Castelfranchi, 2017).

From this verification, the categories were named, in convergence with the perspectives of the studies identified in the systematic literature review and that formed the corpus for the present analysis. The category names that emerge from the Alceste software analysis can be compared to the definitions used to indicate the latent dimensions resulting from a factorial analysis in quantitative surveys. In addition, if the definitions have a meaning recognized and supported by the literature, there is indication that the analysis performed is significant and valid (Colucci and Montali, 2008).

### 3. Systematic review on sustainable human resource management

#### 3.1 Theoretical outline

The following systematic literature review shows a predominance of exploratory studies and some difficulties in conceptualization, as well as, different terminologies to link sustainability and HRM: Sustainable HRM, Sustainable Work System, HR Sustainability, Sustainable Management of HR and Sustainable Leadership.

Given the theme’s conceptual multiplicity and contemporaneity, the literature is still diverse and fragmented (Ehnert *et al.*, 2013; Kramar, 2014; Järlström *et al.*, 2016). Moreover, definition of the term sustainable human resource management is imprecise and the implications of the process of organizational results present different approaches (Kramar, 2014). The theoretical multiplicity of the concept of sustainability influences such context (Table 1).

*{Table 1 about here}*

As Table 1 shows, sustainability is a major principle for human resource management and it unfolds into two elements: the contributions of sustainable management of human resources applied to financial performance and organizational goals considering employees’ satisfaction, commitment and well-being; the sustainable nature of the process enables the maximization of corporate results and a decrease in damage to stakeholders (Kantabutra, 2014; Sotome and Takahashi, 2014).

#### 3.2 Result analysis

Following, the selection of studies which aimed specifically in the subject of human resource sustainable management, the 115 articles were classified according to the year of publication (Figure 1). Through this analysis, three phases (Voegtlin and Greenwood, 2016) were identified in relation to the evolution of publications: an incubation phase, which includes articles published in 2001 (2%); A second phase, called incremental growth, considering studies

conducted between 2005 and 2012 (32%); And finally, the last phase, with the accelerated growth in the number of publications (66% of the studies were developed between the years 2013 and 2018). The trend line also shows the growing interest and the innovativeness of the sustainable management of human resources concept (Zink, 2013; Ehnert *et al.*, 2016).

*{Figure 2 about here}*

Considering the journals in which the papers were published, the research reveals that: 11.3% of them (13 papers) were published in The International Journal of Human Resource Management; 6.1% of the papers (7 papers), in Asia-Pacific Journal of Business Administration; 4.3% (5 papers) in Industrial and Commercial Training; 3.5% (4 papers) in the Journal of Business Ethics and others 3.5 % (4 papers) in Zeitschrift für Personalforschung. These five journals comprise a total of 28.7% (33 papers), while the remaining 71.3% (82 papers) were published in 69 different journals.

The dominant theoretical lenses used are directly connected to the keywords from the search: 70.4% (81 papers) were theoretically based on: “Sustainable Human Resource Management” (22.6%); “Green Human Resource Management” (13.0%); Sustainable Leadership (10.4%); “Human Resource Management” (8.7%); “Corporate Social Responsibility” (8.7%); and Leadership for Sustainability” (7.0%).

Methodologically, the papers can be divided in: conceptual paper (32.2%) survey (29.6%), case study (18.3%), literature review (10.3%), and, field study (9.6%), showing a well balance between theoretical (42.6%) and empirical (57.4%) works. **Considering empirical works, 29.6% (34 papers) used quantitative methods and 27.9% (32 papers) used qualitative methods (the others 42.5% were theoretical).** Still considering the empirical works, 38.3% (44 papers) used companies in multiple industry sectors as unit of analysis (i.e. multinationals studies, or surveys in diverse sectors); 2.6% (3 papers) did empirical studies in cement sector; 2.6%, (3 papers) in ICT companies; 2.6% (3 papers), in universities; 1.7% (2 papers), in health care; 1.7% (2 papers), in hotels. The 7.8% (9 papers) remaining comprise empirical studies in nine different industry sectors.

The most prominent authors cited in the studies (excluded self-citation) were: Ehnert (2009), cited in 20.0% of the papers, Daily & Huang (2001), in 11.3%; Kramar (2014), in 10.4%; Jabbour and Santos (2008), in 9.6%; Avery and Bergsteiner (2001), in 8.7%; and Mariappanadar (2003), in 6.1% of the papers. Considering the countries: 8.7% of studies (10 papers) were carried out in Thailand; 7.0% (8 papers), in Brazil; 6.1% (7 papers), in Australia; 4.3% (5 papers) in Germany; 4.3% (5 papers), in United States of America; 3.5% (4 papers), in India; and 3.5% (4 papers), in United Kingdom. The remaining 20% of the papers (23 papers) were carried out in 18 different countries.

Within the corpus of 115 abstracts, Alceste classified 510 ECU (74%) out of the 694 that were created and generated four stable categories. The classes and the main words in each class are presented in a dendrogram (distance tree) generated by that software (Figure 3). From this classification, the axes and the classes were named. The chi-square values ( $\chi^2$ ) associated with each word represents its semantic importance within the class, which was valuable in highlighting the differences between the classes, and the various distributions of the content typologies.

*{Figure 3 about here}*

The distance three represents visually a descending hierarchical classification and guided the researcher's analysis since the interpretation needs to take into consideration that classes of discourse are very different (beginning of three) or somehow overlapping (end of three) in their use of language (Illia *et al.*, 2014).

The debate on sustainability in a corporate and human resource management context relates to practices and business strategies that have a significant impact on natural and social resources, as well as on the different environments within the organization; those will, in turn, influence management conditions and the future context of business transactions (Ehnert and Harry, 2012). In this sense and considering that organizations seek business sustainability, management practices should focus on creating strategic value based on three elements: people, environment and profitability (Dao *et al.*, 2011).

Each category identified are focussed in selective ways and provides slightly different ways of understanding and accessing sustainable human resource management (Figure 4). The most meaningful category (42% of the variance explained) is category 1, which represents 8.00% of the ECU. It is entitled "Leadership for Sustainability", because it refers to works by Avery (2005) and Avery and Bergsteiner (2010). Avery's model (2005) is based on six core elements of sustainable leadership: adopting a long-term perspective, investing in people, creating a strong organizational culture, support for innovation, environmental and social responsibility and ethical behavior.

{Figure 4 about here}

The *first category*, the sustainable leadership, aims to balance profit and to care for the people and the preservation of the environment, having a long-term perspective that allows corporations to survive, even during periods of recession (Avery and Bergsteiner, 2011; McCann and Sweet, 2014). In this case, the Leadership for Sustainability incorporates several sustainable practices related to the organization's employees. Some authors (Kantabutra, 2014; Suriyankietkaew and Avery, 2014) support the incorporation of sustainable leadership in the field of human resource management.

In the perspective of the stakeholders' theory, it is expected that the organizational managers develop a decision-making process, taking into consideration the interests of the linked members of the corporative sphere (Jensen, 2001; Matos and Silvestre, 2013; Jamali *et al.*, 2015; Silvestre, 2015). In this concept the manager contemplates a vision beyond of the maximization of shareholders' wealth, aiming the interests of the individuals or the institution wellbeing, which can aid the achievement of the organizational objectives (Phillip *et al.*, 2003), including workers linked to the company. Therefore, companies need to create economic value through the effectiveness of their operations in a sustainable manner and human resource management must develop policies and actions focused on long-term survival and corporate success, contributing to the workplace well-being and benefiting society (Bondarouk and Brewster, 2016).

More specifically, it is also possible to link stakeholder theory and sustainable management of human resources (Järlström *et al.*, 2016), based on four main reasons (Guerci *et al.*, 2013):

- a) effective management requires stakeholder involvement and the human resource management system needs to develop a stakeholder driven mindset. This



characteristic, besides making this management process more coherent with the organizational context, can represent its legitimacy in the corporate scope;

- b) In convergence, the process of human resource management must broaden its performance beyond the economic objectives of shareholders. In this sense, the development of actions that focus on stakeholders improves the perception about the value that human resource management adds to organizational success;
- c) the stakeholder perspective assists in the development of a differentiated view of the purely instrumental approach, in which the understanding of organizational conflicts is based only on the supposed antagonistic relations between employees and employers;
- d) stakeholder orientation favors the adoption of ethical processes for the management of human resources, fostering the perception of procedural and distributive justice in the organization.

Other sustainable leadership practices, such as training and constant development, work relation improvements, employment retention (avoid layoff), continuousness process of planning and the appreciation of experiences and contribution from employees, it is also emphasized aspects linked to the human resource sustainable management (Avery and Bergsteiner, 2011).

The *second category* is called “Environmental Dimension” and it represents 29.00% of the ECUs. It includes studies on the role of human resource management in promoting the environmental sustainability of organizations. This perspective is dealt within studies by McCann and Holt (2010), Merriman and Sen (2012), Longoni *et al.* (2014), Benn *et al.* (2015), Jabbour (2015), Rae *et al.* (2015), O'Donohue and Torugsa (2016).

The majority of studies on environmental and sustainable management of human resources have an empirical and, in many cases, quantitative design. Consequently, some terms (data, survey, results, search, evidence, limitation, empirical fact and findings) were grouped in this category. Even though studies in this area are already assessing the influence of human resource management process on environmental sustainability in an organizational context, some authors highlight further research opportunities in the area (Jackson and Seo, 2010; Wagner, 2011).

According to Wagner (2015), in the past, organizations were not concerned about environmental preservation, mainly due to poor or lack of regulations. The creation of new and stricter rules increased business costs. Given this context, companies developed short term solutions, with little involvement of human resource management once it was not clear how the area could effectively contribute to environmental management actions. The environmental approach of sustainability, integrated to the human resource management, is called in this reading as Green Human Resource Management. It is related in this dimension the practices of the human resource management which favor in meeting the needs of environmental sustainability (Wagner, 2013).

The factors linked to human resource management - as training, development and reward system - are essential for a sustainable management implementation (Jabbour *et al.*, 2008; Lozano and Huisingh, 2011). From the factors presented, it is conclusive that the human resource management is important for the environmental sustainability, once that this process disposes tools which make possible to mobilize employees, promote coordinated actions and promote changes in the work process and in the behavior of the individuals (Dubois and Dubois, 2012).

Analysis of the results allowed the authors to identify a *third category* that relates to the “tensions and paradoxes” (Economic dimension) permeating sustainable human resource management. Its terms emerge from studies that address the existing dualities in the objectives of the process: Ehnert (2009a), Aust *et al.* (2015), Peters and Lam (2015).

According to Ehnert (2009b), the dilemmas of corporate sustainability are: financial growth and social and environmental sustainability; short-term and long-term vision; importance of shareholders as compared to other stakeholders; and ethical dilemmas.

Therefore, dualities and dilemmas are constant elements in the life of a human resources professional: on one hand, human resource management needs to promote the efficiency of processes, reduce costs and increase business profitability in the short term; on the other, it needs to invest in the development of human capacity and provide sustainability for the organization in the long term (Kramar, 2014).

In this context, tensions arise from the duality between productivity goals (linked to the economic dimension of sustainability) and human well-being (Zink, 2013). Moreover, from the perspective of human resource management, such paradox highlights the tensions between the performance targets set for the workforce and their personal objectives, inserting, in this context, the organizational goals (Aust *et al.*, 2015).

This duality is also highlighted by Wilkinson *et al.* (2001). According to those authors duality emerges when the question is how employers can balance the interests of stakeholders and, at the same time, preserve a sustainable work environment for employees. They believe the organization should focus simultaneously on the results of sustainable human resources, aiming at profitability and the company's survival, and meet the needs and aspirations of employees in relation to work. Aust *et al.* (2015) points out, such issues are challenges to the establishment of policies and human resource management practices.

Finally, the *fourth category* referred to as “social dimension” included the perspective of corporate social responsibility emphasized by Aggerholm *et al.* (2011); Yang *et al.* (2013) and Stefano *et al.* (2017), for example. Corporate social responsibility can be considered a subfield of organizational sustainability (Marrewijk, 2003; Weber, 2008). Therefore, companies should focus on economic sustainability, while avoiding harmful externalities to society or environment (Yang *et al.*, 2013).

One of the objectives of corporate social responsibility is to voluntarily integrate social, environmental and economic strategies established by the organization (Sanchez-Hernandez and Gallardo-Vázquez, 2013). Therefore, the principles of corporate social responsibility are embedded in sustainability and some studies consider such concepts as synonyms (De Prins *et al.*, 2014).

The relationship between sustainability and human resource management is an innovative approach in the field of management studies. Being a fairly new perspective (Dao *et al.*, 2011; Ehnert and Harry, 2012; Mak *et al.*, 2014), sustainable human resource management still requires deepening into its concepts and practices, in order to reduce inconsistencies found in the literature (De Prins *et al.*, 2014). Furthermore, research on the subject are still evolving (Ehnert and Harry, 2012) and comprising predominantly conceptual and exploratory studies (Ehnert *et al.*, 2016).

#### **4. Discussion: a proposed model on SHRM**

Studies on Sustainable HRM can be analyzed in a perspective timeline (Ehnert and Harry, 2012). First definitions of Sustainable HRM focussed on sustainable work systems

considering their economic, social and environmental dimensions (Müller-Christ and Remer, 1999; Gollan, 2000; Zaugg *et al.*, 2001). A second wave of studies included studies linked to systematically, sustainability and human resource management, including research on the externalities of human resource strategies and the impacts of downsizing, for example. The last wave includes interdisciplinary studies that emphasize a broader understanding of the role of HRM towards a social debate of sustainability (Cohen *et al.*, 2012; Mariappanadar, 2012; Kramar, 2014; Ehnert *et al.*, 2016).

From the several categories and the evolution of studies which address the human resource sustainable management, a conceptual multiplicity about the theme is identified. On the other hand, there is convergence in the studies, in the meaning of knowing the importance of the human and social aspects for the sustainability of the companies (Kramar, 2014). The reading on the subject also emphasizes two distinct and complementary approaches: the human resource management supporting organizational sustainability and sustainability practices from the human resource management (Cohen *et al.*, 2012; Ehnert *et al.*, 2013; Guerci and Pedrini, 2014).

The first approach highlights the role of human resource management in supporting business sustainability (Cleveland *et al.*, 2015) adopting practices that could influence individuals and groups in developing attitudes and behaviors consistent with a sustainable approach (Avery and Bergsteiner, 2010; Cohen *et al.*, 2012; Parkes and Borland, 2012). Although there is comprehension on the importance of the sustainable organizational development, the process of defining sustainable strategies are not always clear. In this occurrence is possible to emphasize the crucial role of the human resource management, taking into consideration that the definition of the sustainable strategies requires involvement from several organizational areas (Jabbour and Santos, 2008).

Considering the results described in the previous section, a theoretical model on SHRM was built from the grounded theory process (Figure 5). The model presents: (i) leadership as a promoter of sustainable development and as a key factor for achieving stakeholders' expectations; (ii) the practices that connect human resources management in supporting organizational sustainability and the sustainability concept presented in human resources management practices; (iii) the key stakeholders emerged in this context, especially corporate employees.

{Figure 5 about here}

The model synthesizes how human resource management can contribute to business sustainability through some practices, such as: the talent attraction due to the organization's commitment to sustainability; the training and programs for knowledge acquisition and development of abilities that contribute to the goals of organizational sustainability; the inclusion of sustainability goals in evaluation and compensation practices; the creation of an organizational climate that fosters the development of sustainability practices; organizational support to promote behaviors aimed at corporate sustainability; the management of organizational diversity and; internal communication to reinforce the importance of corporate sustainability (Jabbour and Santos, 2008; Cohen *et al.*, 2012; Yang *et al.*, 2013). Considering these arguments, the following proposition is presented:

*Proposition 1* - Practices of sustainable human resource management has a positive impact on environmental, social and economic performance of organizations.

For the second approach, sustainability principles could be incorporated into human resource management practices (Taylor *et al.*, 2012; Ehnert *et al.*, 2013; Guerci and Pedrini, 2014). One of the pioneer studies, that covers sustainability vision of the human resource management, was elaborated by Gollan (2000). For the author, organizational sustainability must be based on acknowledgment, recognition and the promotion of the professionals' capabilities. In case these matters are not contemplated, there is a great tendency of losing talents by the company. Hence, the human dimension of sustainability is important considering that employees tend to leave the company in search of balance, personal realization and happiness, in case they feel harmed by the organizational practices or by the impossibility to integrate work with personal life (Au and Ahmed, 2014).

From the perspective of the human resource sustainable management, the managers have the opportunity to improve work relationship. In this sense some assumptions can be emphasized (Gollan, 2000):

- a) the company ought to promote the organizational learning and constantly develop the career of their employees, emphasizing it even during crisis, the importance of permanent qualification of employees;
- b) the company ought to include activities of participation and involvement for the employees, aiming to value their capacity;
- c) the company needs to develop practices which enables balance between the personal and professional lives of the employees, through controlling and flexibilizing the daily working hours;
- d) the corporation needs to adjust the infrastructures and work systematics within the individual, organizational and social levels, providing the sustainability of long term tactics for professionals with higher or lower qualification;
- e) lastly, from these human resource sustainable management practices and recognizing the needs of the employees, it is expected that there will be improvement in satisfaction and commitment at work, leading to a gain in productivity and profit for the business.

The human resource management practices are based in three principles (Ehnert, 2009b). The first one is related to the ability of the organization to attract and maintain talents and to be considered as a company where professionals would desire to work for, that means to become an attractive company comparing to the other competitors. In this line, the organization needs to develop practices that aim: (i) to provide an attractive and challenging work environment; (ii) to promote cultural and gender diversity and equal opportunities; (iii) to encourage the corporate reputation as socially responsible and trustworthy; (iv) to sponsor the work-life balance; and (v) to develop appropriate rewards practices (Ehnert, 2009b; Hirsig *et al.*, 2013, Järlström *et al.*, 2016).

The second principle emerges from the necessity of a healthy and motivated workforce. Therefore, the company must develop actions to promote the health and safety at the workplace, reduction and prevention of stress, adequate workforce adjustment for activities to be performed, designing ergonomic work conditions enabling the wellbeing of the employees and favoring the balance between the work and personal lives of the individuals (Gollan, 2000; Ehnert, 2009b; Hirsig *et al.*, 2013; Järlström *et al.*, 2016). Lastly, investment in the qualification of the employees, aiming current and future scenarios, presenting sustainable human resource management as the third principle. For the achievement of this goal companies develop actions in education and long-term learning, training programs and development of personnel and the individual, group and management levels, programs for professional qualification or internship,

talents management and sequence of internal programs, tutoring and mentoring actions and activities which promote employability for the employees (Gollan, 2000; Boudreau and Ramstad, 2005; Ehnert, 2009b; Hirsig *et al.*, 2013).

The arguments presented suggest that sustainable management of human resources is characterized by multidimensionality (Ehnert, 2009b; Guerci and Pedrini, 2014; Järlström *et al.*, 2016) and the following research proposition is suggested:

*Proposition 2* - The sustainability of the human resource management process focuses on attracting, maintaining and developing professionals.

Although the literature presents these two conceptual approaches, it is possible to distinguish some integration between the two perspectives for human resource management benefits from sustainability and assists in its implementation (Guerci and Pedrini, 2014). Mohrman and Shani (2011) support such interpretation. According to them, organizational sustainability depends on the workforce understanding the company's new objectives and mission. In addition, human resource management practices are a vital sign to professionals believe in the organization's commitment to sustainability.

In addition, it should be emphasized that this association can be strengthened by the performance of organizational managers through the vision of sustainable leadership, which establishes shared values that impact workers' ethical conduct and improve stakeholder relations (McCann and Sweet, 2014). The understanding of these relationships is strengthened through stakeholder theory, considering that this view advocates that organizational managers make decisions focusing on individuals' and institutions' well-being, beyond the domain of shareholders (Cohen *et al.*, 2012). In convergence, it is proposed that:

*Proposition 3* - Sustainable leadership has a positive impact on sustainable human resources management and organizational sustainability.

In summary, the SHRM model points out that human resource management enables the promotion of social welfare, considering that individuals and organizations can work together, in a reciprocal and sustainable manner, seeking long-term benefits. This research also found evidence that this process only occurs when the leadership establishes share values which influence ethical manner of the employees and better their relationship with the stakeholders.

## 5. Conclusions

In conclusion, beyond the triple bottom line concept, leadership plays a very important role in sustainable human resource management. A formal and clear leadership definition is, in fact, the most important element for the implementation of sustainability principles in human resource management. As the number of studies increases, we could expect some convergences among these issues.

The analyses of these studies allowed the authors to recognize the resistance in the simultaneous exploration of sustainability and its relationship with human resource management. Parallel research focussing on the concept of "Green HRM" (Green Human Resource Management) and surveying the relationship between human resource management and the environmental dimension of sustainability have been identified.

In addition, human resource management practices should focus on the needs of employees and their families and go beyond the mere fulfillment of legal regulations. This would include training and development opportunities, career management, democracy in the workplace and employees' participation. It should also focus on social responsibility initiatives,

observing the interests of internal and external participants and striving for short term efficiency and long-term sustainability.

In this point, some questions could be raised: What are the drivers and the barriers to SHRM considering sustainable business models? How to monetize non-financial values generated by SHRM? How to articulate SHRM with the interests of different stakeholders, in order to provide the benefits of sustainable management beyond the boundaries of the company?

From the contemplated research analysis in the present study, it was noted the importance of the integration between the practices from human resource management and the organization sustainability. In this sense it is suggested the development of future studies that evaluate how the action from human resource sustainable management impacts the psychological and social wellbeing of the individuals and in the behavior of the professionals in terms of satisfaction and commitment with the company. This suggestion comes from the argument in which these following factors enable gain of opportunities for the organizations, once that satisfied and committed professionals tend to promote a profitable, productive and the performance growth in business. Therefore, a satisfactory economic performance, favors the investments in the social – including human resources - and environmental aspects and consequently, the cooperative sustainability.

In sum, the organizational sustainability directed to the human resource management, can be presented as a mediator factor or as a final objective. As a means, the politics and practices of the human resource management aid in the development of the mentality and actions so that the corporative sustainability can be reached. As an end, the principles of sustainability can be incorporated in the human resource management practices, which will provide long term physical, social and economic wellbeing for the employees.

The present study expects to make theoretical and practical contributions to HRM studies. Firstly, it analyzed the dimensions of sustainable human resource management, obtaining an integrative perspective. Secondly, it provided a panoramic assessment of available research, allowing the authors to identify gaps of knowledge and, consequently, new topics to be investigated. Finally, it can offer to companies and stakeholders a perspective beyond the triple bottom line concept: the inclusion of the sustainable leadership for human resource management.

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### **References**

Abitan, A., Krauth-Gruber, S., 2015. The two sides of disgust: A lexical and thematic content analysis of narratives of personally experienced physical and moral disgust. *Soc. Sci. Inf.* 54(4), 470-496, <https://doi.org/10.1177/0539018415597316>.

- Adams, R. J., Smart, P., Huff, A. S., 2017. Shades of grey: guidelines for working with the grey literature in systematic reviews for management and organizational studies. *Int J Manage Rev*, v. 19, n. 4, p. 432-454, 2017.
- Aggerholm, H. K., Andersen E., Thomsen, C., 2011. Conceptualising employer branding in sustainable organisations. *Corp. Comm.: Int. J.* 16(2), 105-123, <http://dx.doi.org/10.1108/13563281111141642>.
- Au, W. C., Ahmed, P. K., 2014. Sustainable people management through work-life balance: a study of the Malaysian Chinese context. *Asia-Pac. J. Bus. Admin.* 6(3), 262-280, <http://dx.doi.org/10.1108/APJBA-02-2014-0024>.
- Aust, I., Brandl, J., Keegan, A., 2015. State-of-the-art and future directions for HRM from a paradox perspective: Introduction to the Special Issue. *Ger. J. Res. Hum. Resour. Manag.* 29(3-4), 194-213, <http://dx.doi.org/10.1177/239700221502900303>.
- Avery, G., 2005. *Leadership for sustainable futures: achieving success in a competitive world*. Edward Elgar Publishing, Massachusetts.
- Avery, G., Bergsteiner, H., 2010. *Honeybees and Locusts: The Business Case for Sustainable Leadership*. Allen & Unwin, St. Leonards.
- Avery, G., Bergsteiner, H., 2011. Sustainable leadership practices for enhancing business resilience and performance. *Strateg. Leadersh.* 39(3), 5-15, <http://dx.doi.org/10.1108/10878571111128766>.
- Azapagic, A., 2003. Systems approach to corporate sustainability: a general management framework. *Process. Saf. Environ.* 81(5), 303-316, <http://dx.doi.org/10.1205/095758203770224342>.
- Benn, S., Dunphy, D., Griffiths, A., 2015. Employee participation and engagement in working for the environment. *Pers. Rev.* 44(4), 492-510, <http://dx.doi.org/10.1108/PR-10-2013-0179>.
- Bondarouk, T., & Brewster, C., 2016. Conceptualising the future of HRM and technology research. *Int. J. Hum. Resour. Manag.* 27(21), 2652-2671, <http://dx.doi.org/10.1080/09585192.2016.1232296>.
- Boudreau, J. W., Ramstad, P. M., 2005. Talentship, talent segmentation, and sustainability: A new HR decision science paradigm for a new strategy definition. *Hum. Resour. Manag.* 44(2), 29-136, <http://dx.doi.org/10.1002/hrm.20054>.
- Boxall, P., 2014. The future of employment relations from the perspective of human resource management. *J. Ind. Relat.* 56(4), 578-593, <http://dx.doi.org/10.1177/0022185614527980>.
- Castelfranchi, Y., 2017. Computer-aided text analysis: an open-ai red laboratory for social sciences. *JCOM.* 16 (2), C04.
- Claro, P. B. O., Claro, D. P., Amâncio, R., 2008. Understanding the sustainability concept in organizations. *Revist. Adm.* 43(4), 289-300, <http://dx.doi.org/10.1590/S0080-21072008000400001>.
- Cleveland, J. N., Byrne, Z. S., Cavanagh, T. M., 2015. The future of HR is RH: Respect for humanity at work. *Hum. Resour. Manag. Rev.* 25(2), 146-161, <http://dx.doi.org/10.1016/j.hrmr.2015.01.005>.
- Cohen, E., Taylor, S., Muller-Camen, M., 2012. HRM's role in corporate social and environmental sustainability. *SHRM Report*. SHRM, <https://www.shrm.org> (accessed 10.11.2015).
- Colucci, F. P., Montali, L., 2008. Comparative application of two methodological approaches to the analysis of discourses. *Int. J. Mult. Res. Approaches*, 2(1), <http://dx.doi.org/10.5172/mra.455.2.1.57>.
- Cook, D. J., Mulrow, C. D., Haynes, R. B., 1997. Systematic reviews: synthesis of best evidence for clinical decisions. *Ann Intern Med*, 126, (5), 376-380.
- Daily, B. F., Huang, S., 2001. Achieving sustainability through attention to human resource factors in environmental management. *Int. J. Oper. Prod. Manag.* 21(12), 1539-1552, <http://dx.doi.org/10.1108/01443570110410892>.

- Dalud-Vincent, M., 2010. Les «choix» du sociologue avec Alceste-Du paramétrage des unités de contexte aux résultats obtenus. *Bulletin of Sociological Methodology*, 107(1), 23-48, <http://dx.doi.org/10.1177/0759106310369970>
- Dao, V., Langella, I., Carbo, J., 2011. From green to sustainability: Information Technology and an integrated sustainability framework. *J. Strateg. Inf. Syst.* 20(1), 63-79, <http://dx.doi.org/10.1016/j.jsis.2011.01.002>.
- Darcy, C., Hill, J., McCabe, T. J., McGovern, P., 2014. A consideration of organisational sustainability in the SME context: A resource-based view and composite model. *Eur. J. Train. Dev.* 38(5), 398-414, <http://dx.doi.org/10.1108/EJTD-10-2013-0108>.
- De Prins, P., Van Beirendonck, L., De Vos, A., Segers, J., 2014. Sustainable HRM: Bridging theory and practice through the 'Respect Openness Continuity (ROC)'- Model. *Manag. Rev.* 25(4), 263-284, <http://dx.doi.org/10.1688/mrev-2014-04-Prins>.
- Docherty, P., Kira, M., Shani, A. R., 2008. *Creating sustainable work systems: Developing social sustainability*. 2. ed. Routledge, New York.
- Dubois, C. L. Z., Dubois, D. A., 2012. Strategic HRM as social design for environmental sustainability in organization. *Hum. Resour. Manag.* 51(6), 799-826, <http://dx.doi.org/10.1002/hrm.21504>.
- Dyllick, T., Hockerts, K., 2002. Beyond the business case for corporate sustainability. *Bus. Strateg. Environ.* 11(2), 130-141, <http://dx.doi.org/10.1002/bse.323>.
- Dyllick, T., Muff, K., 2015 Clarifying the Meaning of Sustainable Business: Introducing a Typology From Business-as-Usual to True Business Sustainability. *Organ. Environ.* 1(19), 1-19, 2015, <http://dx.doi.org/10.1177/1086026615575176>.
- Ehnert, I., 2006. Sustainability Issues in Human Resource Management: Linkages, theoretical approaches, and outlines for an emerging field, in: 21st EIASM SHRM Workshop, Birmingham, March, p. 28-29.
- Ehnert, I., 2009a. Sustainability and human resource management: reasoning and applications on corporate websites. *Eur. J. Int. Manag.* 3(4), 419-438, <http://dx.doi.org/10.1504/EJIM.2009.028848>.
- Ehnert, I., 2009b. *Sustainable Human Resource Management: a conceptual and explanatory analysis from a paradox perspective - contributions to management science*. Springer-Verlag, Heidelberg.
- Ehnert, I., Harry, W., 2012. Recent developments and future prospects on sustainable human resource management: introduction to the special issue. *Manag. Rev.* 23(3), 221-238, <http://dx.doi.org/10.2307/41783719>.
- Ehnert, I., Harry, W., Zink, K. J., 2013. *Sustainability and human resource management: developing sustainable business organizations*. Springer Science & Business Media, Germany.
- Ehnert, I., Parsa, S., Roper, I., Wagner, M., Muller-Camen, M., 2016. Reporting on sustainability and HRM: A comparative study of sustainability reporting practices by the world's largest companies. *Int. J. Hum. Resour. Manag.* 27(1), 88-108, <http://dx.doi.org/10.1080/09585192.2015.1024157>.
- Elkington, J., 1997. *Cannibals with forks: the triple bottom line of 21st century*. Capstone Publishing, United Kingdom.
- Freitas, W. R. S., Jabbour, C. J., Santos, F. C. A., 2011. Continuing the evolution: towards sustainable HRM and sustainable organizations. *Bus. Strateg. Ser.* 12(5), 226-234, <http://dx.doi.org/10.1108/17515631111166861>.
- Freitas, W. R. S., Jabbour, C., J. C., Santos, F. C. A., 2011. Continuing the evolution: towards sustainable HRM and sustainable organizations. *Bus Strat. Series*, 12(5), 226-234.
- Glaser, B. G., 1998. *Doing Grounded Theory. Issues and Discussions*. Mill Valley, Ca.: Sociology Press.
- Glavič, P., Lukman, R., 2007. Review of sustainability terms and their definitions. *J. Clean. Prod.*, 15(18), 1875-1885, <http://dx.doi.org/10.1016/j.jclepro.2006.12.006>.



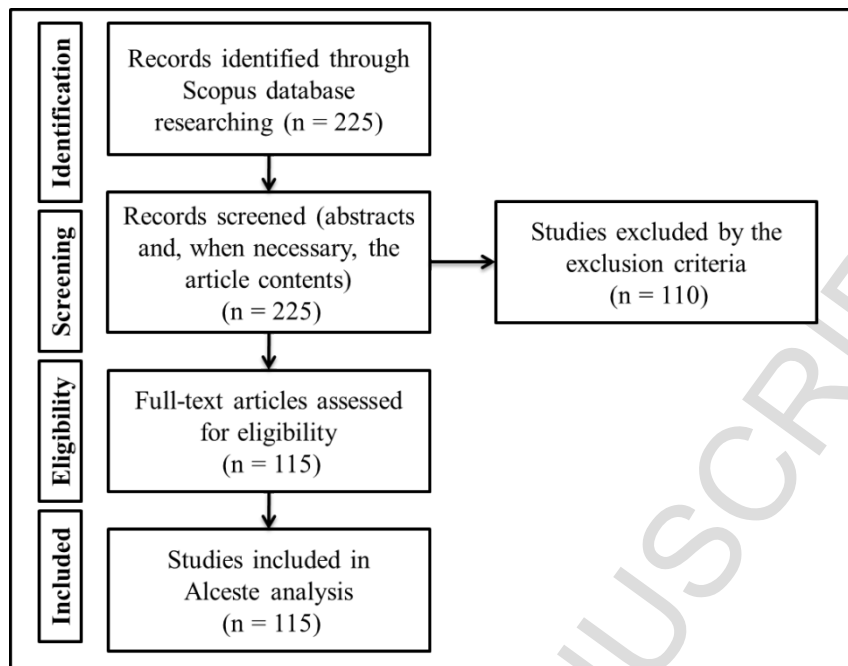
- Gollan, P. J., 2000. Human resources, capabilities and sustainability, in: Dunphy, D., Benveniste, J., Griffiths, A., Sutton, P. (Eds.), *Sustainability: The corporate challenge of the 21st century*. Allen and Unwin, Sydney, p. 55-77.
- Gollan, P. J., 2005. High involvement management and human resource sustainability: The challenges and opportunities. *Asia-Pac. J. Hum. Resour.* 43(1), 18-33, <http://dx.doi.org/10.1177/1038411105050305>.
- Guerci, M., Carollo, L., 2016. A paradox view on green human resource management: insights from the Italian context. *Int. J. Hum. Resour. Manag.* 27(2), 212-238, <http://dx.doi.org/10.1080/09585192.2015.1033641>.
- Guerci, M., Pedrini, M., 2014. The consensus between Italian HR and sustainability managers on HR management for sustainability-driven change—towards a ‘strong’HR management system. *Int. J. Hum. Resour. Manag.* 25(13), 1787-1814, <http://dx.doi.org/10.1080/09585192.2013.860388>.
- Guerci, M., Shani, A. B. R., 2014. Stakeholder involvement in human resource management practices: Evidence from Italy. *Manag. Rev.* 25(2), 80-102, <http://dx.doi.org/10.1688/mrev-2014-02-Guerci>.
- Guerci, M., Shani, A. B. R., Solari, L., 2013. A Stakeholder Perspective for Sustainable HRM: Literature Review and a Research Agenda, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). *Sustainability and human resource management: Developing sustainable business organizations*. Springer Science & Business Media, Germany, p. 205-223.
- Hahn, T., Figge, F., 2011. Beyond the bounded instrumentality in current corporate sustainability research: Toward an inclusive notion of profitability. *J. Bus. Ethics.* 104(3), 325-345, <http://dx.doi.org/10.1007/s10551-011-0911-0>.
- Hirsig, N., Rogovsky, N., Elkin, M., 2013. Corporate Enterprise Sustainability and HRM in Small and Medium-Sized Enterprises A Decent Work Perspective, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). *Sustainability and human resource management: Developing sustainable business organizations*. Springer Science & Business Media, Germany, p. 127-152.
- Hoeppe, J. C., 2013. Practitioner’s View on Sustainability and HRM: The Case of a German Bank, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). *Sustainability and human resource management: Developing sustainable business organizations*. Springer Science & Business Media, Germany, p. 273-294.
- Huselid, M. A., Jackson, S. E., Schuler, R. S., 1997. Technical and strategic human resources management effectiveness as determinants of firm performance. *Acad. Manag. J.* 40(1), 171-188, <http://dx.doi.org/10.2307/257025>.
- Illia, L., Sonpar, K., Bauer, M. W., 2014. Applying Co-occurrence Text Analysis with ALCESTE to Studies of Impression Management. *Brit. J. Manag.* 25(2), 352-372, <http://dx.doi.org/10.1111/j.1467-8551.2012.00842.x>.
- Jabbour, C. J. C., 2015. Environmental training and environmental management maturity of Brazilian companies with ISO14001: empirical evidence. *J. Clean. Prod.* 96, 331-338, <http://dx.doi.org/10.1016/j.jclepro.2013.10.039>.
- Jabbour, C. J. C., Santos, F. C. A., 2008. The central role of human resource management in the search for sustainable organizations. *Int. J. Hum. Resour. Manag.* 19(12), 2133-2154, <http://dx.doi.org/10.1080/09585190802479389>.
- Jabbour, C. J. C., Santos, F. C. A., Nagano, M. S. 2008. Environmental management system and human resource practices: is there a link between them in four Brazilian companies?. *J. Clean. Prod.*, 16(17), 1922-1925. <https://doi.org/10.1016/j.jclepro.2008.02.004>.
- Jackson, K., 2012. An Essay on Sustainable Work Systems: Shaping an Agenda for Future Research. *Manag. Rev. Socio-economic Studies*, 23(3), 296-309, <http://dx.doi.org/10.2307/41783723>.
- Jackson, S. E., Schuler, R. S., Jiang, K., 2014. An aspirational framework for strategic human resource management. *Acad. Manag. Ann.* 8(1), 1-56, <http://dx.doi.org/10.1080/19416520.2014.872335>.

- Jackson, S. E., Seo, J., 2010. The greening of strategic HRM scholarship. *Organ. Manag. J.* 7(4), 278-290, <http://dx.doi.org/10.1057/omj.2010.37>.
- Jamali, D. R., El Dirani, A. M., Harwood, I. A., 2015. Exploring human resource management roles in corporate social responsibility: the CSR-HRM co-creation model. *Bus. Ethics: A Eur Rev.*, 24(2), 125-143.
- Järlström, M., Saru, E., Vanhala, S., 2016. Sustainable Human Resource Management with Salience of Stakeholders: A Top Management Perspective. *J. Bus. Ethics*, article in press, 1-22, <http://dx.doi.org/10.1007/s10551-016-3310-8>.
- Jensen, M. C., 2001. Value maximization, stakeholder theory, and the corporate objective function. *J. Appl. Corp. Financ.* 14(3), 8-21, <http://dx.doi.org/10.1111/j.1745-6622.2010.00259.x>.
- Kantabutra, S., 2014. Sustainable Leadership at Thai President Foods. *Int. J. Bus.* 19(2), 152-172.
- Kantabutra, S., Avery, G. C., 2011. Sustainable leadership at Siam Cement Group. *J. Bus. Strateg.* 32(4), 32-41, <http://dx.doi.org/10.1108/02756661111150954>.
- Kira, M., Lifvergren, S., 2013. Sowing Seeds for Sustainability in Work Systems, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). *Sustainability and human resource management: Developing sustainable business organizations*. Springer Science & Business Media, Germany, p. 56-81.
- Kitchenham, B., 2004. Procedures for performing systematic reviews. Keele, UK, Keele University, 33(2004), 1-26.
- Kitchenham, B., 2004. Procedures for performing systematic reviews. Keele, UK, Keele University, 33, 1-26.
- Kramar, R., 2014. Beyond strategic human resource management: is sustainable human resource management the next approach?. *Int. J. Hum. Resour. Manag.* 25(8), 1069-1089, <http://dx.doi.org/10.1080/09585192.2013.816863>.
- Leal Filho, W., 2000. Dealing with misconceptions on the concept of sustainability. *Int. J. Sust. High. Educ.* 1(1), 9-19, <http://dx.doi.org/10.1108/1467630010307066>.
- Linnenluecke, M. K., Griffiths, A., 2010. Corporate sustainability and organizational culture. *J. World Bus.* 45(4), 357-366, <http://dx.doi.org/10.1016/j.jwb.2009.08.006>.
- Longoni, A., Golini, R., Cagliano, R., 2014. The role of New Forms of Work Organization in developing sustainability strategies in operations. *Int. J. Prod. Econ.* 147, 147-160, <http://dx.doi.org/10.1016/j.ijpe.2013.09.009>.
- Lozano, R., 2008. Envisioning sustainability three-dimensionally. *J. Clean. Prod.* 16(17), 1838-1846, <http://dx.doi.org/doi:10.1016/j.jclepro.2008.02.008>.
- Lozano, R., 2015. A holistic perspective on corporate sustainability drivers. *Corp. Soc. Responsib. Environ. Manag.* 22(1), 32-44, <http://dx.doi.org/10.1002/csr.1325>.
- Lozano, R., Huisingh, D., 2011. Inter-linking issues and dimensions in sustainability reporting. *J. Clean. Prod.*, 19(2), 99-107, <https://doi.org/10.1016/j.jclepro.2010.01.004>.
- Mak, A., Cheung, L., Mak, A., Leung, L., 2014. Confucian thinking and the implications for sustainability in HRM. *Asia-Pac. J. Bus. Admin.* 6(3), 173-189, <http://dx.doi.org/10.1108/APJBA-02-2014-0029>.
- Maley, J., 2014. Sustainability: the missing element in performance management. *Asia-Pac. J. Bus. Admin.* 6(3), 190-205, <http://dx.doi.org/10.1108/APJBA-03-2014-0040>.
- Mariappanadar, S., 2003. Sustainable human resource strategy: the sustainable and unsustainable dilemmas of retrenchment. *Int. J. Soc. Econ.* 30(8), 906-923, <http://dx.doi.org/10.1108/03068290310483779>.

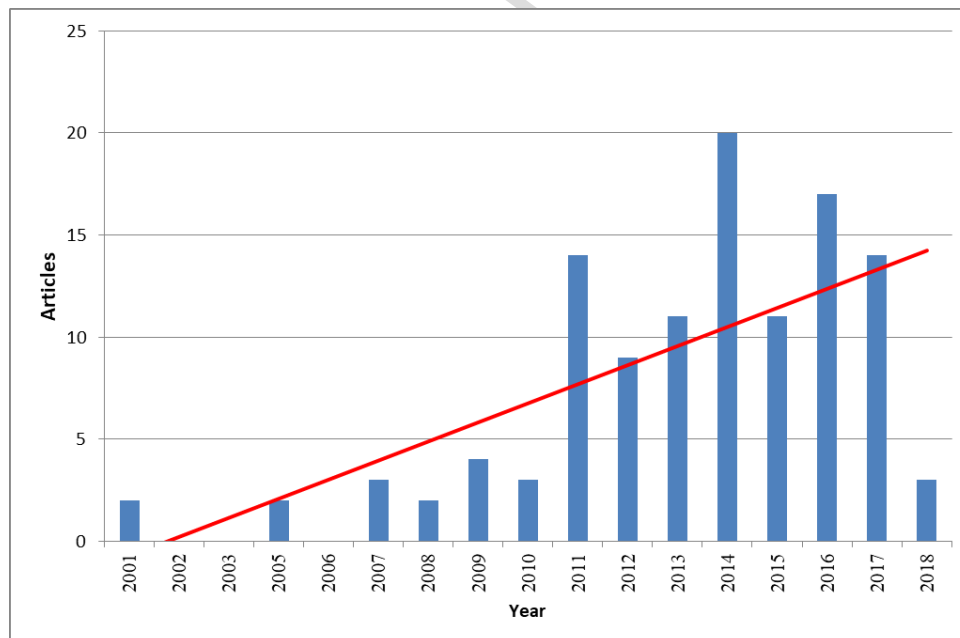
- Mariappanadar, S., 2012. The harm indicators of negative externality of efficiency focused organizational practices. *Int. J. Soc. Econ.* 39(3), 209-220, <http://dx.doi.org/10.1108/03068291211199378>.
- Mariappanadar, S., 2016. Health harm of work from the sustainable HRM perspective: scale development and validation. *Int. J. Manpower.* 37(6), 924-944, <http://dx.doi.org/10.1108/IJM-12-2015-0204>.
- Mariappanadar, S., Kramar, R., 2014. Sustainable HRM: The synthesis effect of high performance work systems on organisational performance and employee harm. *Asia-Pac. J. Bus. Admin.* 6(3), 206-224, <http://dx.doi.org/10.1108/APJBA-03-2014-0039>.
- Marrewijk, M. V., 2003. Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *J. Bus. Ethics.* 44(2-3), 95-105, <http://dx.doi.org/10.1023/A:1023331212247>.
- Matos, S., Silvestre, B. S., 2013. Managing stakeholder relations when developing sustainable business models: the case of the Brazilian energy sector. *J. Clean. Prod.* 45, 61-73, <http://dx.doi.org/10.1016/j.jclepro.2012.04.023>.
- Mccann, J. T., Holt, R. A., 2010. Servant and sustainable leadership: an analysis in the manufacturing environment. *Int. J. Manag. Pract.* 4(2), 134-148, <http://dx.doi.org/10.1504/IJMP.2010.033691>.
- Mccann, J., Sweet, M., 2014. The Perceptions of Ethical and Sustainable Leadership. *J. Bus. Ethics.* 121(3), 373-383, <http://dx.doi.org/10.1007/s10551-013-1704-4>.
- Merriman, K. K., Sen, S., 2012. Incenting managers toward the triple bottom line: An agency and social norm perspective. *Hum. Resour. Manag.* 51(6), 851-871, <http://dx.doi.org/10.1002/hrm.21491>.
- Moher, D. et al., 2010. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Int J Surgery*, 8 (5), 336-341.
- Mohrman, S. A., Shani, A. B., 2011. *Organizing for Sustainability*. Emerald, Bingley.
- Müller-Christ, G., Remer, A., 1999. Umweltwirtschaft oder Wirtschaftsökologie? Vorüberlegungen zu einer Theorie des Ressourcenmanagements, in: *Betriebliches Umweltmanagement im 21. Jahrhundert*. Springer Berlin Heidelberg, Jahrhundert, p. 69-87, [http://dx.doi.org/10.1007/978-3-642-60245-0\\_6](http://dx.doi.org/10.1007/978-3-642-60245-0_6).
- O'Donohue, W., Torugsa, N., 2016. The moderating effect of 'Green' HRM on the association between proactive environmental management and financial performance in small firms. *Int. J. Hum. Resour. Manag.* 27(2), 239-261, <http://dx.doi.org/10.1080/09585192.2015.1063078>.
- Osland, A., & Osland, J. S., 2007. Aracruz Celulose: best practices icon but still at risk. *Int. J. Manpower*, 28(5), 435-450, <https://doi.org/10.1108/01437720710778411>.
- Orsaneck, R., Zink, K. J., 2013. Corporate Human Capital and Social Sustainability of Human Resources Towards an Integrative Measurement Framework, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). *Sustainability and human resource management: Developing sustainable business organizations*. Springer Science & Business Media, Germany, p. 105-126.
- Parakandi, M., Behery, M., 2016. Sustainable human resources: Examining the status of organizational work-life balance practices in the United Arab Emirates. *Renew. Sust. Energ. Rev.* 55, 1370-1379, <http://dx.doi.org/10.1016/j.rser.2015.07.095>.
- Parkes, C., Borland, H., 2012. Strategic HRM: Transforming Its Responsibilities Toward Ecological Sustainability - The Greatest Global Challenge Facing Organizations. *Thunderbird Int. Bus. Rev.* 54(6), 811-824, <http://dx.doi.org/10.1002/tie.21505>.
- Pfeffer, J., 2010. Building Sustainable Organizations: The Human Factor. *Acad. Manag. Perspect.*, 2, 34-45.
- Peters, P., Lam, W., 2015. Can employability do the trick?: Revealing paradoxical tensions and responses in the process of adopting innovative employability enhancing policies and practices in organizations. *Ger. J. Res. Hum. Resour. Manag.* 29(3/4), 235-258, <http://dx.doi.org/10.1177/239700221502900305>.

- Petticrew, M., Roberts, H., 2006. *Systematic Reviews in the Social Sciences: a practical guide*. John Wiley & Sons, Blackwell Publishing, Oxford, UK.
- Petticrew, M., Roberts, H., 2006. *Systematic reviews in the social sciences: A practical guide*. Malden, MA: Blackwell.
- Phillips, R., Freeman, R. E., Wicks, A. C., 2003. What stakeholder theory is not. *Bus. Ethics Q.* 13(4), 479-502, <http://dx.doi.org/10.2307/3857968>.
- Presley, A., Meade, L., Sarkis, J., 2007. A strategic sustainability justification methodology for organizational decisions: a reverse logistics illustration. *Int. J. Prod. Res.* 45(18-19), 4595-4620, <http://dx.doi.org/10.1080/00207540701440220>.
- Rae, K., Sands, J., Gadenne, D. L., 2015. Associations between organisations' motivated workforce and environmental performance. *J. Account. Organ. Change.* 11(3), 384-405, <http://dx.doi.org/10.1108/JAOC-10-2013-0090>.
- Reinert, M., 2001. Alceste, une méthode statistique et sémiotique d'analyse de discours. Application aux Rêveries du promeneur solitaire. *Revue française de psychiatrie et de psychologie médicale*, 5(49), 32-36.
- Roca, L. C., Searcy, C., 2012. An analysis of indicators disclosed in corporate sustainability reports. *J. Clean. Prod.* 20(1), 103-118, <http://dx.doi.org/10.1016/j.jclepro.2011.08.002>.
- Sanchez-Hernandez, M. I., Gallardo-Vázquez, D., 2013. Approaching corporate volunteering in Spain. *Corp. Gov.: Int. J. Bus. Soc.* 13(4), 397-411, <http://dx.doi.org/10.1108/CG-02-2012-0009>.
- Schaltegger, S., Hansen, E. G.; Lüdeke-Freund, F., 2015. Business Models for Sustainability Origins, Present Research, and Future Avenues. *Organ. Environ.* 1-8, <http://dx.doi.org/10.1177/1086026615599806>.
- Schaltegger, S., Lüdeke-Freund, F., Hansen, E. G., 2012. Business cases for sustainability: the role of business model innovation for corporate sustainability. *Int. J. Innov. Sustain. Dev.* 6(2), 95-119, 2012, <http://dx.doi.org/10.1504/IJISD.2012.046944>.
- Sharma, S., Sharma, J., Devi, A., 2011. Corporate social responsibility: the key role of human resources management, in: Simons, R. *Human Resource Management: Issues, Challenges and Opportunities*, Apple Academic Press: New York, p. 9 -18.
- Silvestre, B. S., 2015. A hard nut to crack! Implementing supply chain sustainability in an emerging economy. *J. Clean. Prod.* 96, 171-181, <http://dx.doi.org/10.1016/j.jclepro.2014.01.009>.
- Sotome, R., Takahashi, M., 2014. Does the Japanese employment system harm productivity performance? A perspective from DEA-based productivity and sustainable HRM. *Asia-Pac. J. Bus. Admin.* 6(3), 225-246, <http://dx.doi.org/10.1108/APJBA-02-2014-0031>.
- Suriyankietkaew, S., Avery, G., 2014. Leadership practices influencing stakeholder satisfaction in Thai SMEs. *Asia-Pac. J. Bus. Admin.* 6(3), 247-261, <http://dx.doi.org/10.1108/APJBA-01-2014-0010>.
- Taylor, S., Osland, J., Egri, C. P., 2012. Guest editors' introduction: Introduction to HRM's role in sustainability: Systems, strategies, and practices. *Hum. Resour. Manag.* 51(6), 789-798, <http://dx.doi.org/10.1002/hrm.21509>.
- Thom, N., Zaugg, R. J., 2004. Nachhaltiges und innovatives Personalmanagement: Spitzengruppenbefragung in europäischen Unternehmungen und Institutionen, in: Schwarz, E. J., *Nachhaltiges Innovationsmanagement*. Gabler Verlag, p. 215-245.
- Tranfield, D., Denyer, D., Smart, P., 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British J Manag.*, 14(3), 207-222.
- Tranfield, D., Denyer, D., Smart, P., 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British J Manage*, 14 (3), 207-222.

- Vallbé, J. J., Martí, M. A., Fortuna, B., Jakulin, A., Mladenic, D., Casanovas, P., 2005. Stemming and lemmatisation. Improving knowledge management through language processing techniques. in Proceedings of the B4 Workshop on Artificial intelligence and Law. IVR'05, Granada, Spain, <http://www.lefis.org>. (accessed 10.11.2015).
- Voegtlin, C., Greenwood, M., 2016. Corporate social responsibility and human resource management: A systematic review and conceptual analysis. *Hum. Resour. Manag. Rev.* 26(3), 181-197, <https://doi.org/10.1016/j.hrmmr.2015.12.003>.
- Wagner, M., 2011. Environmental Management Activities and Sustainable HRM in German Manufacturing Firms—Incidence, Determinants, and Outcomes. *Ger. J. Res. Hum. Resour. Manag.* 25(2), 157-177, <http://dx.doi.org/10.2307/23279431>.
- Wagner, M., 2013. 'Green' Human Resource Benefits: Do they Matter as Determinants of Environmental Management System Implementation?. *J. Bus. Ethics.* 114(3), 443-456, <http://dx.doi.org/10.1007/s10551-012-1356-9>.
- Wagner, M., 2015. A European perspective on country moderation effects: Environmental management systems and sustainability-related human resource benefits. *J. World Bus.* 50(2), 379-388, <http://dx.doi.org/10.1016/j.jwb.2014.08.005>.
- WCED., 1987. World Commission on Environment and Development. Our common future. Oxford: Oxford University Press.
- Weber, M., 2008. The business case for corporate social responsibility: A company-level measurement approach for CSR. *Eur. Manag. J.* 26(4), 247-261, <http://dx.doi.org/10.1016/j.emj.2008.01.006>.
- Wilkinson, A., Hill, M., Gollan, P., 2001. *Int. J. Oper. Prod. Manag.* 21(12), 1492-1502, <http://dx.doi.org/10.1108/01443570110410865>.
- Wolfswinkel, J. F., Furtmueller, E., Wilderom, C. P., 2013. Using grounded theory as a method for rigorously reviewing literature. *Eur. J. Inf. Syst.*, 22(1), 45-55, <http://dx.doi.org/10.1057/ejis.2011.5>.
- Yang, N., Colvin, C., Wong, Y., 2013. Navigating corporate social responsibility components and strategic options: the IHR perspective. *Acad. Strateg. Manag. J.* 12(1), 39-58.
- Zaugg, R. J., Blum, A., Thom, N., 2001. Sustainability in Human Resource Management. Working paper No. 51, Institute for Organisation und Personel. University of Bern, Bern.
- Zink, K. J., 2013. Social Sustainability and Quality of Working Life: A Human Factors Perspective on Sustainable HRM, in: Ehnert, I., Harry, W., Zink, K. J. (Ed.). Sustainability and human resource management: Developing sustainable business organizations. Springer Science & Business Media, Germany, p. 35-55.
- Zink, K. J., 2014. Designing sustainable work systems: the need for a systems approach. *Appl. Ergon.* 45(1), 126-132, <http://dx.doi.org/10.1016/j.apergo.2013.03.023>.



**Figure 1** Summarization of the selection process



**Figure 2.** Articles per year of publication.

\* data from 2018 until 20<sup>th</sup> March

Class 1 (8%)		Class 2 (29%)		Class 3 (19%)		Class 4 (44%)	
Leadership for Sustainability		Environmental Dimension		Economic Dimension (Tensions & Paradoxes)		Social Dimension	
ECU	$\chi^2$	ECU	$\chi^2$	ECU	$\chi^2$	ECU	$\chi^2$
Avery	149	harm	82	paradox	69	value	29
principles	93	data	49	HRM	66	concern	19
enterprise	89	survey	47	tension	41	important	19
grid	81	associat+	40	issue	37	corporate	17
leadership	81	employer	32	special	35	how	15
observation	81	cost	31	field	27	resource	14
Rhineland	75	health	25	conclude	27	originality	12
adopt	72	work	23	GHRM	23	human	11
culture	68	effect	23	nature	23	competitif	11
long_term	66	negatif	23	theory	23	need	10
innov+	62	collected	22	employability	23	branding	10
core	58	questionnaire	22	advance	22	specially	10
document+	58	high	21	review	19	demonstrate	10
multi_data	58	study	19	explorer	18		
conglomer+	58	impact	19	policies	18		
examiner	57	manufactur+	19	research	18		
category	53	quantitat+	15	direction	17		
<b>Axis 1-Leadership for Sustainability</b>		<b>Axis 2 – Tiple Bottom Line Concept</b>					

Figure 3. Classes and axes dendrogram - Alceste software.

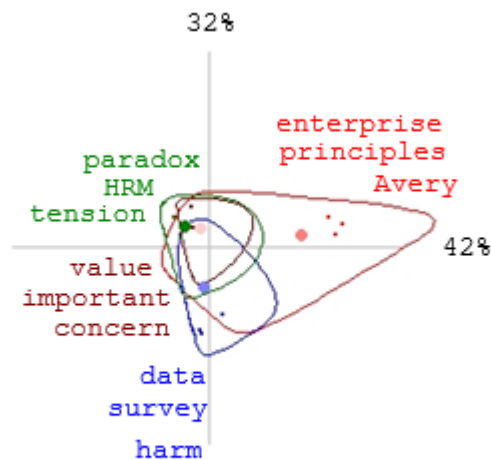


Figure 4. Factorial analyses with classes - Alceste software.

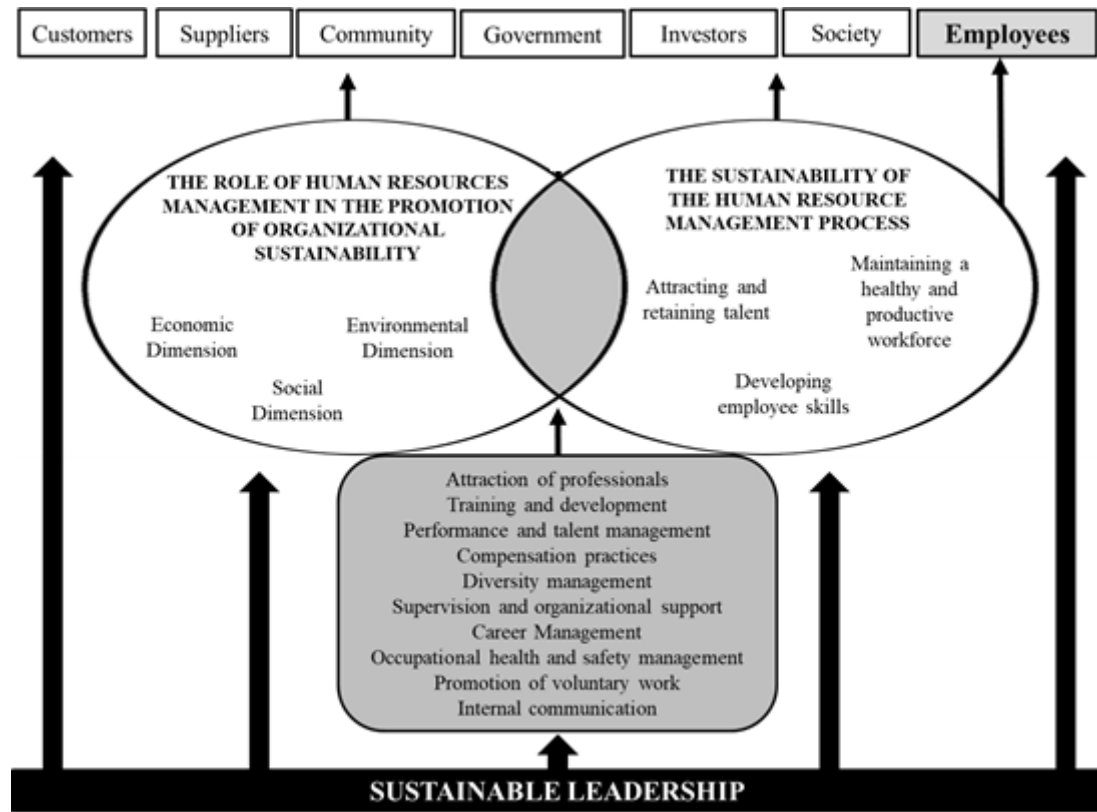


Figure 5. Sustainable Human Resource Management Model.



**Table 1.** Definitions of Sustainable Human Resources Management (SHRM) identified in literature review.

<b>Authors</b>	<b>Definitions</b>
Müller-Christ and Remer (1999)	Sustainable management of human resources related to the actions the organization should implement in order to have lasting access to qualified human resources.
Gollan (2000, p. 60)	“Capacity of organizations to create value in their organizations thereby having the ability and capacity to regenerate value and renew wealth through the application human resource policies and practices. This will entail investment in human knowledge through continuous learning, and the application and development of such knowledge through employee participation and involvement”
Zaugg et al. (2001, p. 1)	“Sustainable human resource management can only be implemented if it is based on individual responsibility of employees and is future-oriented. It is defined by methodological and instrumental approaches whose objectives are long-term-oriented, socially responsible and economically efficient recruiting, training, retaining and disemployment of employees. Increasing employability, guaranteeing a harmonious work-life-balance and enhancing individual responsibility take on an important role in the concept of sustainable human resource management.”
Mariappanadar (2003, p. 910)	“Sustainable HR strategy can be defined as the management of human resources to meet the optimal needs of the company and community of the present without compromising the ability to meet the needs of the future.”
Thom and Zaugg (2004)	Long-term conceptual approaches, such as social responsibility and economic viability recruitment actions, selection, development, maintenance or reduction of the workforce.
Gollan (2005, p. 25)	“Capacity of organisations to create and regenerate value through the sustained application of participative policies and practices.”
Ehnert (2009b, p. 74)	“Sustainable HRM is the pattern of planned or emerging human resource strategies and practices intended to enable organisational goal achievement while simultaneously reproducing the HR base over a long-lasting calendar time and controlling for self-induced side and feedback effects of HR systems on the HR base and thus on the company itself.”
Freitas et al. (2011, p. 226)	“Sustainable human resource management is regarding to achieving organizational sustainability through the development of human resources policies, strategies and practices that support the economic, social and environmental dimensions, at the same time.”
Cohen et al. (2012, p. 3)	“Sustainable HRM is the utilization of HR tools to help embed a sustainability strategy in the organization and the creation of an HRM system that contributes to the sustainable performance of the firm. Sustainable HRM creates the skills, motivation, values and trust to achieve a triple bottom line and at the same time ensures 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.”
Wagner (2013, p. 443)	“Sustainability-oriented sustainable) human resource (HR) management as a management of human resources (HRs) that meets the current needs of a firm and society at large without compromising their ability to meet any future needs.”
Kramar (2014, p. 1084)	“Sustainable HRM could be defined as the pattern of planned or emerging HR strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the HR base over a long term. It seeks to minimise the negative impacts on the natural environment and on people and communities and acknowledges the critical enabling role of CEOs, middle and line managers, HRM professionals and

	employees in providing messages which are distinctive, consistent and reflect consensus among decision-makers.”
Ehnert et al. (2016, p. 90)	“Sustainable HRM can be 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.”
Järlström et al. (2016, p. 4)	“The basic concept underlying the sustainable HRM discussion is that firms seek different kinds of outcomes to satisfy their stakeholders’ expectations. These outcomes may be economic, social, human, and ecological, and firms often seek them simultaneously although any one of the outcomes may be more important to an organization than others.”

**Table 2.** Main terms for data collection.

<b>Terminology</b>	<b>References</b>
<i>Sustainable HRM</i>	Daily and Huang (2001) Pfeffer (2010) Freitas et al. (2011) Ehnert and Harry (2012) Zink (2013) Osranek and Zink (2013) De Prins et al. (2014) Kramar (2014) Mariappanadar and Kramar (2014) Ehnert et al. (2016) Järlström et al. (2016) Mariappanadar (2016)
<i>Sustainable Work System</i>	Docherty et al. (2008) Jackson (2012) Kira and Lifvergren (2013) Zink (2013, 2014)
<i>HR Sustainability</i>	Gollan (2000) Wilkinson et al. (2001)
<i>Sustainable Management of HRs</i>	Ehnert (2006)
<i>Sustainable Leadership</i>	Avery and Bergsteiner (2011) Kantabutra and Avery (2011)
<i>Sustainable Organisation</i>	Jabbour and Santos (2008)