"An exploration of research clusters of sustainable human resource management"

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AN EXPLORATION OF RESEARCH CLUSTERS OF SUSTAINABLE HUMAN RESOURCE MANAGEMENT

Abstract

Sustainable human resource management has gained significant attention and importance over the past years. The present paper aims to review the sustainable HRM literature by identifying the existing research clusters relating to the field and analyzing the common themes per cluster to organize the intellectual base on the topic and identify possible research gaps. There has been a consistent increase in research publications since 2017. The cluster analysis conducted in the present study presented the current state of research per type of sustainable HRM, with over 60% of studies relating to green HRM. General sustainable HRM follows this with 27% and socially responsible HRM – with 11%. In addition, the review sample extracted from the Scopus database showed how sustainable HRM involved CSR, sustainable development, environmental management, and supply chain management.

Moreover, it showed how it could be linked with other disciplines, different contextual variables, and possibilities for cross-disciplinary studies. Furthermore, the results show that much research has concentrated on the green HRM cluster, followed by general sustainable and socially responsible HRM clusters. This paper provided an opportunity to see in a comprehensive way what research is being done per cluster and find the possible research gaps in the current body of literature.

Keywords sustainable human resource management, cluster analysis, green human resource management

JEL Classification M10, M12, M14

INTRODUCTION

Over the past years, the concept of sustainability has become increasingly important. This concept considers its beginnings as a response to the rapid population growth, bringing threats such as pollution, destruction of nature, high unemployment, and excessive exploitation of natural resources (Von Weizsäcker & Wijkman, 2018). This concept gained further traction in late 1980 when the Brundtland Commission defined sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Furthermore, it brought about the issue of the need to manage resources in the best way possible considering the progress of human development. In addition, Elkington (1998) states three principles, called the triple bottom line consisting of people (social aspect), planet (environmental aspect), and profit (economic aspect), to explain the goal of sustainability.

Organizations' demands to act responsibly have also increased with increased attention to sustainability. Hence, leading to sustainability has become one of the key focuses for organizations (Kramar, 2014). Furthermore, organizations are now being held responsible for their



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societal and environmental impacts and address these concerns alongside their economic growth. Therefore, interest in HR functions is followed as it is critical in attaining successful sustainability-driven organizations (Ehnert et al., 2016). In line with this, sustainable human resources management (hereafter, sustainable HRM) has been introduced as a new approach to people management.

Having different perspectives and approaches to studying this growing field helps accumulate more knowledge on sustainable HRM. This, however, makes the relevant body of literature highly complex and challenging to consolidate. In this note, investigating the current state of research in the field by identifying the existing literature's common points may be helpful. This study can have a clear land-scape of the areas of interest in the field and identify possible areas for further research exploration.

1. LITERATURE REVIEW

Sustainable HRM has become a point of interest for practitioners and scholars alike as a new and time-relevant research focus. Many researchers attempted to define sustainable HRM over the past years. The definitions and usage of this term differ primarily in terms of the attention given to specific internal and external outcomes (Kramar, 2014). First, it can refer to the social and human outcomes contributing to the long-term continuation of the organization. Next, it can clarify the different HRM practices that improve environmental outcomes or social and human outcomes as stand-alone factors from the financial outcomes and strategy of the organization. According to Ehnert et al. (2016), sustainable HRM is defined as the adaptation of HRM practices and strategies that enable them to achieve the organization's financial, ecological and social goals over a longterm horizon while controlling for adverse feedback unintended side effects. Despite its variation in characterizing the concept, all recognize the effect of HR outcomes on the organization's survival and success.

The initial interest in the relationship between sustainability and human resource management started with Beer et al. (1984) in the United States, Muller-Christ and Remer (1999) in Germany, Zaugg et al. (2001) in Switzerland, and Gollan (2000) in Australia. These early studies emphasized the importance of sustainability for human resource management and provided basic ideas on how sustainability can be linked to human resource management. In addition, they named their research "Sustainable HRM," and this insight stems from the frequent shortage of natural and human resources needed for a company to

survive (Ehnert et al., 2016). Moreover, Colbert and Kurucz (2007) and Kramar (2014) emphasized that human resource management should play an important role in three areas (economic, social, and environmental responsibility) of sustainable management.

These studies suggest a wide variety of areas in which human resource management can be involved for sustainable management. For example, Kramar (2014) stated that the essence of sustainability lies in the survival and permanence of the organization and that sustainable human resource management research for the organization's sustainability has developed from various perspectives. As such, the commonality of previous studies is that human resource management must be able to contribute to economic, social, and environmental performance from a long-term perspective for the sustainable survival and management of the organization. Therefore, the essential functions of human resource management and three areas (economic, social, and environmental) of sustainable management are related (Kramar, 2014). In addition, common areas emphasized in sustainable management and HRM can be summarized by organizational change (change management), organizational culture, leadership, career development and learning, top talents development, education and training, performance evaluation and compensation, ethics, and worklife balance.

On the other hand, the limitation of these prior studies is that, first, human resource management is suggested to be linked to the sustainable management of companies, but specific explanations on how and why they are related to are lacking. In other words, human resource

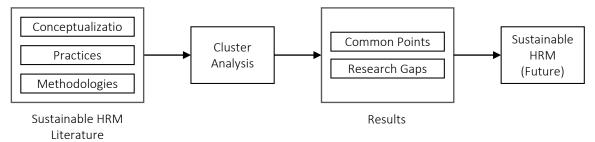


Figure 1. Conceptual framework for sustainable HRM review

management has paid little attention to a specific methodology in terms of application that can contribute to the sustainable survival of companies. Second, the concept of sustainable human resource management (Sustainable HRM) and HRM sustainability of human resource management are mixed or used as the same concept. Sustainable human resource management can be linked to a firm's long-term strategy. In other words, human resource management should play a vital role as a leading driver of long-term corporate survival. On the other hand, sustainability of human resource management is a lagging driver linked to the organization's strategic implementation and is similar to focusing on how various systems related to human resource management can survive. Therefore, further studies call for research to distinguish the two concepts (Zaugg et al., 2001; Spooner & Kane, 2010).

Synthesis and analysis of the existing body of literature relating to sustainable HRM over the past years will help providing an overview and identify the existing themes relating to research in the field. Figure 1 presents the conceptual framework of the present research. Cluster analysis is conducted to provide a more organized view of the different perspectives on studying sustainable HRM. By utilizing the identified clusters, the existing common points are further investigated to find possible research gaps that can help future studies of sustainable HRM.

A classification of Sustainable HRM types from Aust et al. (2020) was adopted for the present study. The following types are listed: triple bottom line HRM, green HRM, socially responsible HRM, and common good HRM. These types were adapted and extended from Dyllick and Muff (2016) and deemed to cover most of the perspectives by scholars on studying sustainability in HRM.

Triple bottom line HRM refers to sustainable HRM concerned with the 3Ps of sustainability- people, planet, and profit (Dyllick & Muff, 2016). This type is defined by HRM competencies, skills, knowledge, and attitudes to create win-win-win situations. This research cluster covers all the aspects of sustainability – social, economic, and environmental. For better inclusion of the different types of studies from the collected data and clarity purposes, this cluster will be referred to as the 'general sustainable HRM' cluster in the subsequent sections.

The second type, green HRM, refers to HRM with a central emphasis on the environmental and economic aspects of sustainability. This cluster includes studies that use HRM to impact green values across an organization or implement green organizational practices and other relevant studies that concentrate on the environmental part of sustainability. The third type is labeled as socially responsible HRM. This type refers to sustainable HRM, which focuses on the social and economic purpose of the organization. This cluster includes relevant studies that try to create awareness of the influence of business on people beyond the organizational boundaries and illustrates time frames.

Studies of sustainable HRM that do not fall into the three identified major clusters above will be classified as 'other sustainable HRM' (Aust et al., 2020). This cluster includes other perspectives on sustainable HRM, including the common good HRM, which refers to HRM competencies, skills, knowledge, and attitudes to contribute to the common good and help solve grand challenges (Aust et al., 2020). The cluster also focuses on the human side of organizational sustainability or ethical HRM. However, it must be noted that these perspectives only produced a minimal number of samples from the data and were combined for simplifying purposes.

2. AIMS AND RESEARCH QUESTIONS

The present paper aims to review the sustainable HRM literature by identifying the existing research clusters relating to the field and analyzing the common themes per cluster to organize the intellectual base on the topic and identify possible research gaps. This study can advance research on sustainable HRM, offer new insights on research, and provide implications for designing and implementing sustainable HRM practices for practitioners.

The following research questions were posed:

- 1) How has the 'sustainable HRM' field developed so far? What are some notable trends in the development of the field?
- 2) What are the main outlets of recent research in this field? What topics are mainly studied?
- 3) Are there any significant 'research clusters' of sustainable HRM? If so, what research clusters are there?
- 4) What are the characteristics of individual research clusters in sustainable HRM? What are the practical and theoretical implications of individual research clusters?

3. METHODS

This study first extracted sustainable HRM literature from Scopus, Elsevier's abstract, and the citation database. The database was selected as a data source as it covers the most comprehensive overview of the world's research output in different fields (Elsevier, n.d.). Moreover, the availability of the Boolean search approach in combination with the collective export feature for search results allows for the easier acquisition and filtering of the available data in a more systematized manner.

For collecting the relevant papers to be used for the following study, the following combination of a search query was used: TITLE-ABS-KEY ("sustainable human resources management" OR "green human resources management" OR "common good human resources management" OR "socially responsible human resources management" OR "triple bottom line human resources management" OR "sustainable HRM" OR "green HRM" OR "common good HRM" OR "socially responsible HRM" OR "triple bottom line HRM" OR "sustainable human resource management" OR "green human resource management" OR "green human resource management" OR "triple bottom line human resource management" OR "triple bottom line human resource management" OR "common good human resource management" OR "common good human resource management" OR "ethical human resource management" OR "ethical human resource management" OR "ethical HRM") AND (LIMIT-TO (SUBJAREA, "BUSI")).

No timeframe was specified for the above search. The exported data included the citation information, bibliographical information, abstract, and keywords of the results yielded by the query. The keyword query was also limited to the business, management, and accounting subject areas to identify the most relevant papers. The initial search query outputted a total of 340 paper results. Further examination for relevance through skimming of abstracts, authors, and document types was done. Duplicates, erratum, and unrelated output were excluded from the data pool. The final database used for this study included a total of 318 documents, which were classified per sustainable HRM cluster.

From the database for review, the development trends via the yearly publication trends, an overview of the publication by sustainable HRM cluster, and the top journals of publications were examined to understand the development of research in the field over the past few years. After that, keyword co-occurrence analysis and term co-occurrence analysis using VOSviewer (van Eck & Waltman, 2010), a network mapping software, was conducted to reveal the relevant keywords, as well as the most co-occurring terms per research clusters. It allows this study to see the recent vital topics on sustainable HRM and visualize the relationship between the identified clusters and their separation. Afterward, an investigation into the most cited and notable papers per cluster is done to identify common interests of study per cluster and possible research gaps that can be addressed.

Sustainable HRM Publication per year

2010 2011 2012 2013 2014 2015 2016 2017 2018

Figure 2. Sustainable HRM research publications per year

4. RESULTS

2006

Examining the development trends in sustainable HRM would be a good start to look at how much is published and where the studies are published. An analysis of the obtained database produced the result of trends relating to studies related to sustainable HRM research. Figure 2 summarizes the number of relevant publications on the research topic per year.

As shown in Figure 2, publications on sustainable HRM have grown a lot compared to the past years. The data also shows the earliest relevant publication on sustainable HRM from 2006. The only output for the particular year, a paper by Rehu et al. (2006), deals with the study of sustainable HRM in China through a case study of a German multinational corporation that established a facility in the country. The appearance of a relevant publication per year indicates the steady interest in the topic over the period. Afterward, considerable growth in 2016 and a consistent increase in research publications were seen from 2017 onwards.

2020 has the most significant number of publications, producing 94 relevant articles.

2019

2020

In addition to the yearly publication trend, the coded publication per sustainable HRM type from the data was also examined. Data output shows 61% (or 195 documents) of studies relating to green HRM. General sustainable HRM follows this with 27% (or 87 documents) and socially responsible HRM with 11% (or 34 documents) of the total sustainable HRM publications. Other sustainable HRM only consisted of 1% (or two documents) of the total publications. Figure 3 summarizes the sustainable HRM publication by type.

The total number of publications per journal was also checked to determine where the research was published. Table 1 summarizes the top 5 sources of publication extracted from the data. The top journals where sustainable HRM research is being published are Journal of Cleaner Production (with 34 publications), International Journal of Human Resource Management (with 17 publications), Corporate Social Responsibility and



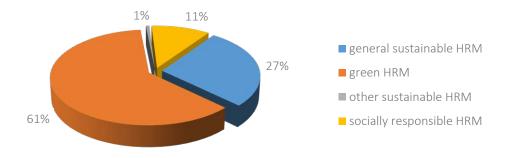


Figure 3. Sustainable HRM literature per type from 2006 to 2020

Environmental Management (with 15 publications), International Journal of Manpower (with ten publications), and Employee Relations (with ten publications).

Table 1. Journals for Sustainable HRM literature publication period from 2006 to 2020

Journal	No. of Publications
Journal of Cleaner Production	34
International Journal of Human Resource Management	17
Corporate Social Responsibility and Environmental Management	15
International Journal of Manpower	13
Employee Relations	10
Journal of Business Ethics	10

This result is consistent with the classification result per sustainable HRM type shown in Figure 3. The Journal of Cleaner Production, which consists of international, transdisciplinary articles dealing with environment and sustainability research, has many publications. The top journals also included the Corporate Social Responsibility and Environmental Management Journal, which is concerned with the social and environmental responsibilities in sustainable development and focuses on developing tools and case studies for improving performance and accountability in these areas. It indicates that while there is a wide variety of emphasis on the study of sustainable HRM, green HRM appears to be a predominant focus of research.

Sources such as the International Journal of Human Resource Management, Employee Relations concerned with HR practices and challenges, and the International Journal of Manpower, which covers human resource planning and labor economics, were also among the journals with the most publications. It is also noteworthy that the Journal of Business Ethics, which is concerned with the ethical issues related to business, is among the top journals where research in sustainable HRM is being published. While much of the journals from the results center on business and management due to limiting keywords used, there were also relevant results that look into other industries like hospitality (Teeuwisse & Brannon, 2020; Wikhamn, 2019) and tourism (Baum, 2018), along with concepts from other disciplines. Despite this, the top 5 journals only comprised around 31% of the total available data can make this study infer the broadly diverse publications on sustainable HRM, supporting the multidisciplinary nature of studies in the field.

Furthermore, it is important to deal with the data on the sustainable HRM research clusters identified above. Initially, to visualize the topics in sustainable HRM that have received the most interest from researchers and identify the currently emerging topics in the field, a keyword co-occurrence analysis was conducted with VOSviewer. Setting the keyword threshold and switching to the overlay visualization aided in better identifying the most relevant author and index keyword tags and the year it co-occurs. Figure 4 presents the result of this analysis.

The analysis shows the keyword threshold setting specified as having a minimum of five cases. The result returns a total of 32 items and is displayed in an overlay temporal view. From the size of the nodes, the most frequently co-occurring keywords are identified as: green HRM (136 occurrences), HRM (75 occurrences), sustainable HRM (64 occurrences), sustainability (44 occurrences), sustainable development (44 occurrences), environmental management (39 occurrences), environmental sustainability (18 occurrences), and CSR (17 occurrences). In addition to this, the temporal view further reveals the emerging topics on sustainable HRM. The recentness of the keywords is indicated via the shade of the nodes. The most recent keywords include HRM practices, environmental performance, and processes like manufacturing, recruitment, and selection, all of which are connected with green HRM. Other recent topics include general topics on sustainability and sustainable development. This result indicates the general recognition that HRM has a vital role in the sustainability of organizations, paving the way for further studies on how to leverage practices to improve performance.

Another term, co-occurrence analysis with VOSviewer, was conducted to map the most relevant topics per research cluster. The analysis presents the co-occurrence of terms from the titles and abstracts of the database and visualizes them based on their relevance. By setting the thresh-

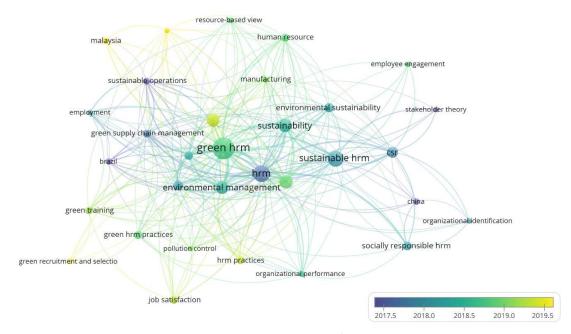


Figure 4. Temporal keyword co-occurrence analysis of sustainable HRM literature

old to a minimum of ten occurrences via binary counting, which indicates the presence or absence of terms, and filtering the outputted terms by relevance, this method could visualize the data network with the most relevant terms relating to sustainable HRM research clusters. Figure 5 shows the visualized map output from this analysis. While most nodes per cluster can be connected to concepts like sustainability and HRM, other keywords are grouped with the specific sustainable HRM cluster.

The general sustainable HRM cluster covers the blue section of Figure 5. The most relevant terms are sustainability, sustainable development, human resource management, sustainable HRM, HRM practice, and challenge. A closer look into the most cited papers in this cluster attempts to explain the concept of sustainable HRM (Ehnert, 2009; Kramar, 2014; Macke & Genari, 2019). Studies in the section also connect it with CSR (Diaz-Carrion et al., 2020; Stahl et al., 2020) and investigate its effects and application (Mariappanadar & Aust, 2017; Mariappanadar & Kramar, 2014; Pellegrini et al., 2018).

The red section shows the green HRM cluster. Its keywords include environmental performance, green supply chain management, green training, selection, hotel, and Malaysia. Relevant papers in this cluster include literature reviews (Pham et al., 2020; Ren et al., 2018; Renwick et al., 2013; Yong et al., 2020). Others focused on green HRM and its impact on supply chain management (Jabbour & de Sousa Jabbour, 2016; Longoni et al., 2018). Studies also focused on green HRM in different countries like Malaysia (Gholami et al., 2016) and Brazil (Teixeira et al., 2016).

The third cluster (in green) shows keywords relating to socially responsible HRM. These include corporate social responsibility, responsible HRM, moderation, mediation, China, India, and practical implication. It appears that many of the relevant articles in this cluster connect it with CSR (Shen & Benson, 2016; Shen & Zhang, 2019). In addition, the studies are also related to the topic of organizational commitment (Kundu & Gahlawat, 2016) and organizational citizenship behavior (Gahlawat & Kundu, 2021; Newman et al., 2016; Zhao et al., 2021). In addition, studies that looked at a specific national context were also present in the Indian context (Gahlawat & Kundy, 2021) and the Chinese context (Zhao et al., 2021).

Other sustainable HRM research clusters are not visible in Figure 5 due to the scarcity of research. Therefore, it only included two studies. One is by Aust et al. (2020), which propose a new type of Sustainable HRM, Common Good HRM. The

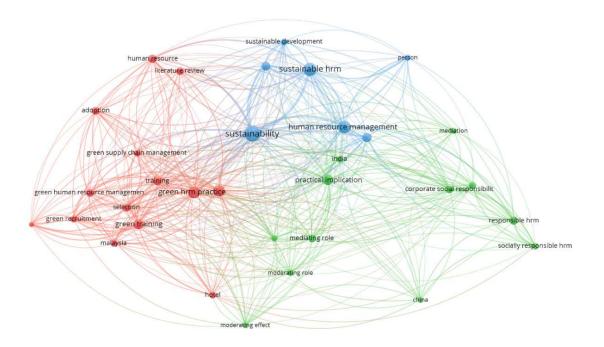


Figure 5. Term co-occurrence analysis of sustainable HRM research clusters

other article by Camuffo et al. (2017) attempts to explore the human side of organizational sustainability, highlighting its ethical side.

5. DISCUSSION

The landscape of sustainable HRM research shows that the topic has grown over the years and is still growing. The publication records per year represent the constant attention on the topic over the period. There was significant growth in 2016, and a sharp increase in research publications has been investigated since 2017.

To illustrate the research clusters in sustainable HRM, a keyword co-occurrence analysis was conducted with VOSviewer. The analysis presents that green HRM, concentrating on the environmental aspect of sustainability, is the most frequently discussed type of sustainable HRM (Pham et al., 2020). Other relevant publications emphasized how green HRM impacts operational activities supply chain management within organizations (Longoni et al., 2018). The results also indicate the importance of investigating green HRM in varying contexts, including cultural and industry differences (Teixeira et al., 2016). However, there still seems to be room for growth in the practices and

green processes, including recruitment, selection, and training, which are seen as the more recent points of interest in the research cluster. In addition, a gap in terms of additional empirical evidence relating green HRM with the green employee attitudes, CSR, or perceived green results may be good points for future research.

Secondly, socially responsible HRM, which focuses on the social aspect of sustainability, mainly was linked with CSR and concepts including organizational commitment and identification (Shen & Benson, 2016; Shen & Zhang, 2019). Therefore, this cluster includes topics of responsible HRM, moderation, mediation, China, India, and practical implication with emphasis on CSR. Additionally, the cluster is also related to the micro organizational behavior, including organizational identification, organizational citizenship behavior, and, in addition, organizational commitment (Gahlawat & Kundu, 2021; Zhao et al., 2021). The analyses also imply that the national or cultural differences play critical roles in examining the sustainable HRM-CSR link. Therefore, further research can tackle the link by systematically exploring the characteristics of sustainable HRM. Moreover, since the present research cluster is primarily connected with CSR and HRM practices, a study on its effect on talent management, particularly on talent retention, could be a gap that can be addressed in further studies.

Furthermore, the general sustainable HRM cluster covers various topics and has been used as the cover term for the general studies connecting sustainability with HRM (Kramar, 2014; Macke & Genari, 2019). Further research may attempt to look into sustainable HRM practices and their effects on the different stages of the HR flow and the individual. There also appears a gap in studying its application in different local or national contexts and more multidisciplinary approaches.

Finally, other clusters of sustainable HRM research may present opportunities for prospect research by exploring the specific aspects that could distinguish it from the currently identified clusters. Specifically, the changes caused by the current pandemic situation provide a possible context for further studies. As this situation affected how human resources operate at organizations, navigating through it or examining its impacts and implications using the different perspectives in sustainable HRM can provide new and timely contributions to the field's growth.

CONCLUSION

The study aims to review the sustainable HRM literature by identifying the existing research clusters relating to the field and analyzing the common themes per cluster to organize the intellectual base on the topic and identify possible research gaps. The present review of the sustainable HRM literature provided a more organized overview of the growing interest in the topic. From the trends offered in the study, it was evident that sustainable HRM has gained significant attention and importance over the past years. However, the various definitions, perspectives, and approaches to studying this field also show high complexity. Therefore, by defining the three major clusters based on the sustainability aspect the different scholars concentrated on, this study can incorporate a wide range of studies and systematically landscape the current research on the field.

The cluster analysis of the data extracted from the Scopus database showed how sustainable HRM involved CSR, sustainable development, environmental management, and supply chain management. Specifically, the results show that much research has concentrated on the green HRM cluster, followed by general sustainable and socially responsible ones. The paper also looked into the other sustainable HRM cluster, which included common good HRM and ethical HRM concerning organizational sustainability. It also implies that sustainable HRM can be linked with other disciplines and industries. Finally, it showed possibilities for more cross-disciplinary studies moving forward.

Furthermore, this study further suggests growing concerns or gaps by exploring the current research clusters. For instance, green-oriented HR practices, including socially responsible hiring and CSR training, are considered the more recent points of interest. Additional empirical evidence relating to green HRM is required to confirm the positive association with the green employee attitudes, CSR, or perceived green results. Further research can tackle the link by investigating its effect on talent management, particularly talent retention. A study calls for exploring the application of sustainable HRM in different cultural contexts and more multidisciplinary approaches. It is worth noting that the temporal and permanent effects of the current pandemic situation on sustainable HRM provide a possible research venue for further studies.

However, it is worth mentioning that the present study presents some limitations. First, this study includes the database and keyword use. Pooling of data was solely done via the Scopus database due to the collective export feature. While this database provides a relatively wide range of coverage for research contributions, it seems plausible that it does not cover all relevant articles relating to sustainable HRM. Moreover, the keywords used for the following study concentrating on the clusters might have filtered

out other relevant documents relating to the current topic. Lastly, the data analysis method presents some limitations in providing specific findings from the sustainable HRM articles.

Despite this limitation, the present paper provides a foundation for advancing research on sustainable HRM by presenting a specific view of the relevant research per research cluster. It also provided an opportunity to see what research is being done per cluster and find the possible research gaps in the current body of literature. Scholars interested in sustainable HRM research can identify these potential areas of growth and bridging opportunities across the concepts in different clusters from the systematic view of the existing topics and approaches to sustainable HRM research.

AUTHOR CONTRIBUTIONS

Conceptualization: Ji-Young Ahn, Ellyn Jenica Avila.

Data curation: Ellyn Jenica Avila.

Formal analysis: Ji-Young Ahn, Ellyn Jenica Avila.

Investigation: Ji-Young Ahn. Methodology: Ellyn Jenica Avila. Project administration: Ji-Young Ahn.

Supervision: Ji-Young Ahn. Validation: Ji-Young Ahn.

Writing – original draft: Ji-Young Ahn.

Writing – review & editing: Ellyn Jenica Avila.

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