



Green Human Resource Management Research: Comparative Analysis of Research Inside and Outside China Based on Knowledge Graph

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Abstract. Using CiteSpace6.2R4, this paper visually analyzes important literatures in the field of green human resource management (GHRM) published 182 in WOS and 125 in CNKI from 2000 to 2022. Based on literature reading, this paper compares and analyzes the results presented by knowledge graph, and summarizes the research conclusions: There is a significant gap between the research intensity of Chinese scholars in the field of GHRM and international scholars, and the research objects are mainly from developing countries. Future research can focus on the antecedents, situational factors and dynamic trends of GHRM.

Keywords: green human resource management, CiteSpace, comparative analysis, research prospect.

1 Introduction

On August 24, 2023, Japan's nuclear sewage incident into the Pacific Ocean triggered a heated social debate, and environmental issues have attracted national and social attention, and the business community has put forward higher demands for this. Green sustainable development has gradually become an important part of the competitive advantage of enterprises, so it is of great significance to integrate green ideas into human resource management practice.

The research of Chinese scholars is still in its infancy [1], mainly summarizing and analyzing the principles, contents, implementation framework, influence mechanism, theoretical construction, development prospect and development measures established in the process of GHRM. However, the research of international scholars has been in the stage of evaluation and enhancement [2], mainly around the two levels of organization and individual to carry out empirical research on its mechanism of action and influence. However, few scholars, based on the current research trends in China, use a combination of quantitative and qualitative methods to carry out comparative analysis of research inside and outside China. The data in this study includes the research results in recent years, which is conducive to supplementing and verifying the research conclusions drawn by scholars based on qualitative analysis. Meanwhile, the visuali-

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zation map is conducive to revealing the evolution process of this field and grasping the research dynamics of GHRM. Therefore, this study can enrich the research of GHRM, and provide suggestions and directions for the development of this field.

2 Data sources and analysis methods

2.1 Data sources

All publication period was 2000-2022. The Chinese literature in this study was sourced from CNKI. The advanced search function was used. The topic was set as "green human resource management", and paper type was selected as academic journal. Similarly, the international literature is derived from SCI and SSCI at Web of Science. Set the search condition as Topic= "green human resources management" or Topic= "GHRM", and select "Article", "Review Article", "Early Access" and " Proceeding Paper " as the document type, obtained 879 results. Manual screening was carried out to select all the literatures closely related to the topic so as to improve the effectiveness of the analysis results. So, 125 Chinese literatures and 182 international literatures of the most representative literatures were finally obtained.

2.2 Analysis methods

Based on CiteSpace6.2R4 and literature review, the differences in the research on GHRM in China and abroad are summarized from three aspects: annual distribution of the number of published documents, country distribution and theme, and future research suggestions are put forward.

3 Comparative analysis of GRHM research inside and outside China

3.1 Bibliometric analysis

Annual distribution of publication volume

As shown in Figure 1, the number of Chinese publications has maintained a relatively stable growth rate. On the contrary, since 2016, the number of international annual publications has increased sharply and gradually turned to rapid growth, indicating that international scholars have paid more attention to the research in this field. Therefore, there is still a significant gap between Chinese scholars and international scholars in the field of GHRM research.

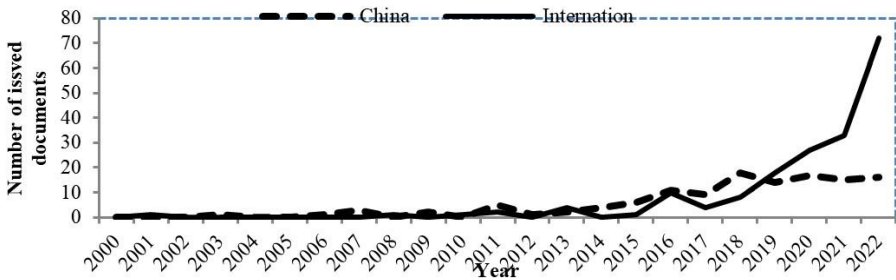


Fig. 1. Annual distribution map of GHRM research literature

Source: Self-made.

Country distribution.

GHRM research is mainly distributed in developing countries. In terms of the number of articles published, Pakistan was the most prominent, followed by Malaysia, China, France and Australia. In terms of cooperation, countries have been expanding cooperation targets in recent years and have closer ties.

3.2 Theme analysis

As shown in Figure 2 and Figure 3, the research and development process of GHRM can be divided into five periods.

In the first period (2000-2005), international scholars paid attention to the role of GHRM on the environment. Chinese scholars carried out research on the greening of human resource management.

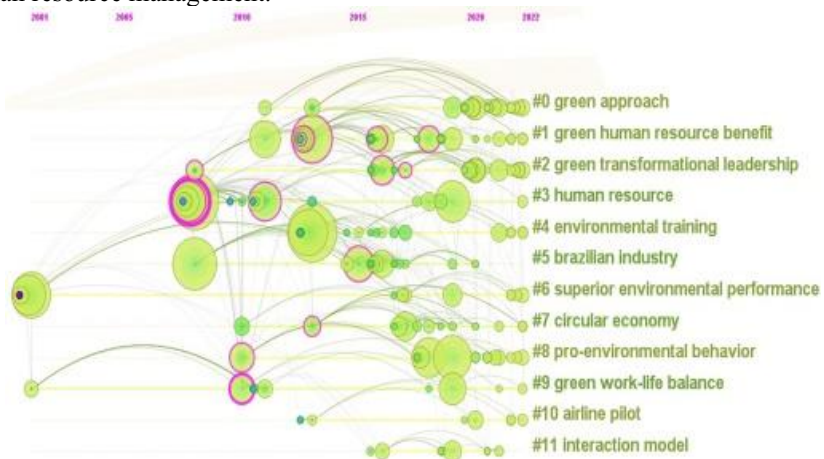


Fig. 2. Time-line chart of international GHRM

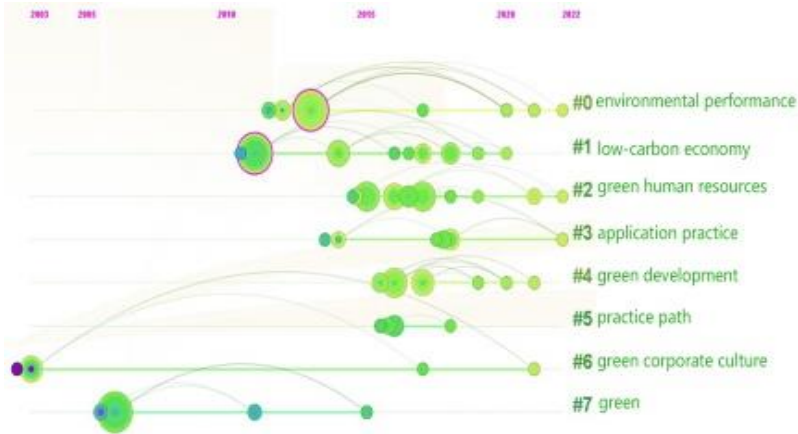


Fig. 3. Time-line chart of China GHRM

Source: CiteSpace6.2R4

In the second period (2005-2010), international scholars paid great attention to the topic of environmental management to explore the relationship between it and GHRM. In addition, mainly through case studies, scholars have explored the factors that affect GHRM, such as commitment and organizational culture, as well as the impact of sustainability, performance and competitive advantage on GHRM. In contrast, the research of Chinese scholars mainly focuses on the concept of GHRM.

In the third period (2011-2015), international scholars gradually shifted on corporate social responsibility, and began to extensively study the impact of GHRM on financial performance and innovation. In addition, international scholars gradually shifted their discussions on the consequences of GHRM to the individual level. At the same time, international scholars also carried out a review study. Under the influence of national economy and policies, Chinese scholars are willing to study GHRM measures to adapt to new changes based on the background of low-carbon economy or economic transformation. There are a lot of review studies.

In the fourth period (2016-2020), international scholars have carried out a wealth of empirical research on the model and mechanism of GHRM. In the study of the antecedents of GHRM, key words such as supply chain management, transformational leadership and workplace are very prominent. In the outcome study of GHRM, corporate performance and organizational citizenship behavior have attracted much attention from international scholars. In contrast, Chinese scholars, based on the perspective of green development, further deepen the concept of GHRM, discuss the implementation strategies of GHRM in different times and development backgrounds, and attach importance to the current practice and future prospects of GHRM. Meanwhile, Chinese scholars have started a small number of empirical studies, and are more concerned about the consequences of GHRM.

In the fifth period (2021-2022), scholars continue to study the antecedents and consequences of GHRM. International scholars began to study ethical leadership, green commitment of top managers and green intellectual capital as the antecedents of

GHRM. Green innovation, pro-environmental behavior and job performance are all positive influences of GHRM. Chinese scholars proposed measures to implement GHRM in different enterprises such as chemical enterprises and printing enterprises [3].

4 Future research prospect

4.1 Focus on the antecedents of GHRM

There are relatively few studies on the antecedents of green human resource management. In terms of leadership style, further research can be conducted on leadership styles such as service-oriented leadership [4] or responsible leadership [5]. In addition, we can study more leadership styles with negative leadership behaviors. For example, the impact of leadership styles such as abusive leadership on GHRM can be further studied.

In terms of intellectual capital, scholars generally study green intellectual capital from three directions which are different dimensions of green intellectual capital [6], synergistic effect of green intellectual capital [7] and interaction among sub-dimensions of green intellectual capital [8]. Future studies may further explore the impact of the interaction of different dimensions of green intellectual capital on GHRM.

4.2 Focus on situational factors of GHRM

With the advent of the era of big data, the internal human resource management of enterprises begins to develop in the direction of digital [9]. How to deal with the needs of The Times in GHRM needs to be further discussed.

In recent years, Chinese scholars have conducted a wealth of review studies on different industries. Although the empirical research of international scholars is rich, due to different national conditions and organizational culture, empirical studies on Chinese localization are still lacking.

4.3 Pay attention to the dynamic trend of GHRM

Comparatively speaking, there are few studies in developed countries. It is of great practical guiding significance to further strengthen the research on GHRM in developed countries.

The international research on GHRM has shown a trend of integration with other disciplines, such as the relationship between GHRM and green supply chain [10]. Scholars have also made a preliminary study on GHRM under the concept of "green marketing" [11]. Future research can further deepen the integration of GHRM with other disciplines to discover more factors conducive to promoting GHRM.

5 Conclusions

Environmental issues are related to the survival and development of all mankind. As an enterprise, it is the future trend to actively carry out GHRM. This study is of great significance and showed that: First, the influence of different types of leadership styles, especially those that produce negative leadership behavior, and the interaction between different dimensions of green intellectual capital as antecedents on GHRM. Second, empirical studies of the era background of digital transformation or for different industries need to be enriched. Third, we should enrich the research on GHRM in developed countries and pay attention to the integration of GHRM with other disciplines. This study further enriched the research of GHRM, and it provides theoretical support and practical guidance for enterprises to carry out GHRM practice. In the future, the sample size of literature can be increased to make up for the shortcomings of this study.

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