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Examining the Bibliometric Trends of Green Recruitment and Selection (GRS)

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Abstract

The domain of green recruitment and selection (GRS) has experienced considerable growth and interest in recent times, significantly impacting both business and academia. This research conducts an extensive analysis of green recruitment scholarship spanning from 2015 to 2024, employing bibliometric analysis methodologies. Utilizing data sourced from the Dimensions database, the study identifies emerging research patterns, pivotal themes, and influential scholars in this area. Findings unveil a notable upsurge in green recruitment literature originating from 54 nations, underscoring its global acknowledgment and relevance amidst escalating environmental awareness. Nonetheless, the study acknowledges certain limitations, including dependence on a single database and challenges posed by researchers sharing identical names. Future research avenues are suggested, stressing the importance of cross-cultural and interdisciplinary investigations to deepen the understanding of green recruitment dynamics. Additionally, recommendations are put forth for leveraging alternative databases and sociograms to enrich the scope and diversity of research within this burgeoning field.

Keywords: Green Recruitment and Selection, Bibliometric Analysis, Citation Analysis, GHRM, Co-Authorship Analysis, Environment, etc.

Introduction

In today's environmentally conscious society, the adoption of green practices has become widespread across various sectors. Customers increasingly prefer products from environmentally responsible businesses, prompting organizations to integrate green policies and practices into their operations (Opatha & Arulrajah, 2014). Suppliers, too, favor businesses committed to reducing pollution, reflecting a growing emphasis on environmental stewardship in industry dynamics. Striking a balance between industrial development and environmental preservation is crucial for organizations (Daily & Huang, 2001). Studies show that embracing green business practices can lead to greater profitability (Murari & Bhandari, 2011). Consequently, organizations are incorporating green practices across all functional areas, with human resources (HR) departments playing a pivotal role. HR departments are responsible for recruiting employees and keeping them informed about significant issues, including environmental concerns.

The concept of "green recruiting (GR)" introduced by John Sullivan in 2007 involves leveraging an organization's environmental stance as a recruitment strategy. GR signals to prospective employees

the company's commitment to environmental issues, making it an enduring trend adopted by organizations worldwide. Green hiring and selection (GRS) integrate environmental management into the recruitment process, using HRM policies to promote environmental preservation and resource conservation within organizations. GR not only emphasizes the importance of environmental responsibility but also enhances an organization's attractiveness to applicants and distinguishes it from competitors. Online channels and virtual interviews are utilized to minimize environmental impact, while promoting eco-friendly actions in the workplace contributes to creating an appealing work environment. Amidst a competitive job market, GR provides organizations with an opportunity to stand out and attract environmentally conscious candidates.

Research suggests that employees hired through green hiring processes are more likely to understand and support the organization's environmental objectives, contributing to environmentally conscious innovation (Jianfeng Jia et al., 2018). Job seekers increasingly prioritize working for environmentally conscious companies, recognizing the significance of environmental protection and its impact on an organization's brand image. Therefore, recruiters must incorporate their organization's green initiatives into their brand identity to attract potential candidates.

The following research questions are used in this bibliometric review to shed light on the evolution of the literature only linked to green recruitment, an essential GHRM function, in light of the developing pattern in the field of GHRM:

1. What are the total number of articles, growth trend and worldwide distribution in the field of GRS in terms of emerging and advanced nations?
2. Which are those journals on GRS that have the most citation impact?
3. Who are the most prominent researchers in the field of GRS that have most citations?
4. What is the relatedness of researchers in GRS?

Literature Review

The literature on Green Human Resource Management (GHRM) extensively examines strategies, policies, and practices aimed at incorporating environmental considerations into HR activities, particularly recruitment and selection. While qualitative studies dominate the literature, several empirical investigations shed light on the significant impact of recruitment and selection on organizational and environmental performance (Rawashdeh, 2018; Esen & Ozsozgun Caliskan, 2019; Mayangsari & Nawangsari, 2019; Sinaga & Nawangsari, 2020; Mousa & Othman, 2020; Rasheed & Alam, 2020; Shoaib et al., 2021).

Green recruitment practices have been found to enhance organizations' ability to attract and retain environmentally conscious talent, consequently influencing the organization's green behavior, brand image, and performance (Oaya, Ogbu, & Remilekun, 2017; Yu & Ramanathan, 2015). Factors such as environmental standards, transparent commitment to the environment during hiring, inclusion of environmental information in job advertisements, and seeking candidates with environmental management experience contribute to effective green recruiting (Mudji Astuti, 2018). Moreover, green recruitment serves as a foundation for attracting candidates seeking environmentally friendly workplaces, positively impacting workforce commitment and organizational allure (Khan & Muktar, 2020).

Practical aspects of green recruitment focus on adopting practices to enhance organizational reputation and talent retention (Jepsen & Grob, 2015; Aranganathan P, 2018). Studies highlight the positive correlation between green recruitment and employee engagement, suggesting its importance in attracting skilled personnel and fostering engagement, particularly in public institutions (Alnawaiseh & Almasarweh, 2020). Innovative technologies are increasingly being utilized in green recruitment practices, including online application processes, virtual interviews,

and job postings on digital platforms (Aranganathan P, 2018). However, challenges such as political intervention and limited online resources for job seekers hinder the adoption of green recruitment practices (Taiwo et al., 2022). Despite the growing importance of green recruitment, empirical studies in this area remain limited, with most research focusing on broader GHRM topics. This study aims to fill this gap by conducting a systematic review and bibliometric analysis of green recruitment literature. By examining existing research and identifying gaps, this study seeks to guide future research and contribute to the advancement of knowledge in the field of green recruitment.

Method

Bibliometric analysis has gained prominence for its comprehensive insights into specific subjects (Van Eck & Waltman, 2017; White & McCain, 1998). Garfield (1955) highlighted its utility, encompassing mathematical tools and statistical methods to analyze various documents, including articles and books. Statistical inference, employed in bibliometric studies (De Bakker et al., 2005; Bouyssou & Marchant, 2011), illuminates scientific issues and disciplinary trends. Such analyses reveal historical patterns, current advancements, and future research opportunities, offering a novel approach to understanding topics (Durieux & Geveno, 2010).

Collection of Data

The study utilizes published data from the Dimensions database, renowned for its extensive collection of peer-reviewed papers. Data from UGC Journals Group-II (2015-2024) were scrutinized based on various criteria like nations, journals, fields, authors, and affiliations. Green Recruitment and Selection (GRS) network research was conducted post-assessing keyword frequency. All relevant data, including titles and abstracts, were extracted from Dimensions and imported into VOSviewer for analysis. VOSviewer allows examination of relationships among authors, nations, citations, and frequently used phrases in the articles, offering insights into the article's content and connections.

Main Information Regarding the Collection

101 reputable peer-reviewed publications have published 244 articles about “Green Recruitment and selection” that were written by 594 scholars from 54 countries and span a variety of fields like business, management, and accounting. Since 864 authors contributed to the total, author collaboration is growing. Authors per documents are valued 2.43 while documents per authors are valued 0.41. Vosviewer, an open-source R-package software, was specifically used for the bibliometric investigation (Aria & Cuccurullo, 2017).

Bibliometric Analysis

Bibliometric analysis is a quantitative method for assessing scientific publications, gauging research production, dissemination, and impact through statistical techniques. It aids in evaluating research patterns, scholar influence, and organizational contributions. Employing mathematical and quantitative methodologies, bibliometric analysis predicts future research trajectories, as seen in studies on “green recruitment and selection” (Yu et al., 2017, 2018). By analyzing published data on authorship, affiliations, citations, and keywords, bibliometrics offers insights into research trends (Norton, 2001). Technology-driven researcher efficacy is tracked over time, with tools like “VOSviewer” generating bibliometric maps to visualize authorship and publication relationships using co-citation and co-occurrence data.

Results

The outcomes are presented with respect to the five objectives discussed above.

Total Number of Papers, Increasing Trend and Worldwide Distribution in the Field of Green Recruitment and Selection in Terms of Developing and Developed Countries

Since 2014, the Dimensions database has indexed 247 documents pertaining to green recruitment and selection (GRS). This comprises 241 articles, 2 book chapters, 3 edited books, and 1 monograph. Figure 1 illustrates the trajectory of GRS scholarship.

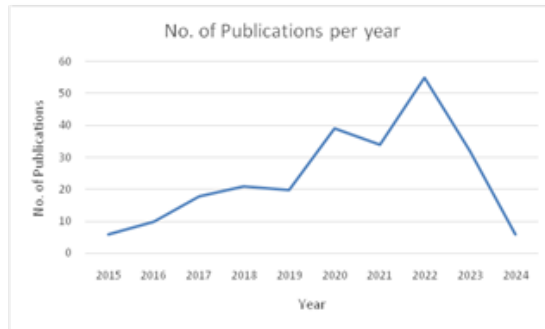


Figure 1 The Annual Numbers of Papers on GRS in Dimensions

The graph above provides intriguing insights into the evolution of Green Recruitment and Selection (GRS). While there have been fluctuations in the number of papers from 2015 to 2024, the concept gained significant traction among scholars since 2020, with 166 out of 241 papers being published during these years. This upward trend suggests that GRS remains a developing area, evident from the sudden surge in literature.

The heatmap in Figure 2 highlights that China leads in knowledge generation on GRS, with 75 documents receiving a maximum of 1768 citations, followed by the United Kingdom (26 documents, 1026 citations), and Malaysia (18 documents, 732 citations). Developing countries contributed 57% of the total documents (187 out of 327) but received only 43.15% of the citations (3929 out of 9105). Despite producing more documents, publications from developed nations received the most citations, indicating their dominance in GRS literature. This aligns with the broader trend in management research, where American and European societies lead, followed by growing Asian societies (Gantman et al., 2015).



Figure 2 Global Distribution in Developed and Developing Nations

Analysis of Influential Journals Having Highest Citation Impact

The second objective aimed to identify influential journals, documents, and their citation impact in the field. The top 15 highly cited journals accounted for 84.6% of the total 189 documents. The distribution of these documents across journals provided insights into the academic impact of GRS. Notably, Sustainability led with 91 publications, garnering 1416 citations and a mean citation of 15.56. Meanwhile, the International Journal of Production Economics had the highest citation impact, with a mean of 81.33 for just three publications, emphasizing the environmental focus of GRS. Other journals discussing GRS include IOP Conference Series Materials Science and Engineering, Symmetry, International Journal of Manpower, Business Strategy and the Environment, and Applied Sciences, illustrating the multidisciplinary nature of GRS scholarship. See Table 1 for a detailed ranking of the most cited journals in the GRS field.

Table 1 Top 15 Journals Publishing GRS Scholarship Ranked

S. No.	Name	Area	No. of Publications	Citations	Citations Mean
1	Sustainability	Sustainability and sustainable development	91	1,416	15.56
2	IOP Conference Series Materials Science and Engineering	Materials science and engineering	13	44	3.38
3	International Journal of Environmental Research and Public Health	Environmental Sciences and Engineering	12	151	12.58
4	Environmental Science and Pollution Research	Environmental Science and related subjects	9	148	16.44
5	Symmetry	Natural sciences	5	170	34
6	Production Planning & Control	Management of operations	5	219	43.8
7	PLOS ONE	Advance science	3	14	4.67
8	Annals of Operations Research	Operations research	3	87	29
9	International Journal of Production Economics	Engineering and management	3	244	81.33
10	Business Strategy and the Environment	Business Strategy	3	215	71.67
11	Journal of Industrial Engineering and Management	Industrial Engineering and Management	3	47	15.67
12	Production	Production Management	3	18	6
13	Applied Sciences	Applied natural sciences	3	23	7.67
14	International Journal of Manpower	HRM	2	41	20.5
15	International Journal of Production Research	Production Management	2	114	57

Pioneer Authors in GRS Scholarship

Bibliometric analysis also identifies leading authors within a specific field (McCain, 1990; Nerur et al., 2008; White & McCain, 1998). In the realm of GRS, Charbell José Chiappetta Jabbour stands out with 325 citations across four documents, followed by Ana Beatriz Lopes De Sousa De Sousa Jabbour (115 citations), José Moleiro Martins (66 citations), Gyöngyi Vörösmarty (101 citations), Amir Hossein Azadnia (78 citations), Imre Dobos (101 citations), and Morteza Yazdani (201 citations), each with three documents. This limited number of scholars in the top rankings reinforces the notion that GRS remains an evolving concept. See Table 2 for the key authors in GRS scholarship.

Table 2 Top 10 Pioneer Authors on GRS Scholarship

S. No.	Name	Organization, Country	Publications	Citations	Citations Mean
1	Charbell José Chiappetta Jabbour	NEOMA Business School, France	4	325	81.25
2	Ana Beatriz Lopes De Sousa De Sousa Jabbour	University of Lincoln, United Kingdom	3	115	38.33
3	José Moleiro Martins	Instituto Politécnico de Lisboa, Portugal	3	66	22
4	Gyöngyi Vörösmarty	Corvinus University of Budapest, Hungary	3	101	33.67
5	Amir Hossein Azadnia	National University of Ireland, Maynooth, Ireland	3	78	26
6	Imre Dobos	Budapest University of Technology and Economics, Hungary	3	101	33.67
7	Morteza Yazdani	Valencian International University, Spain	3	201	67
8	David Barnes	University of Westminster, United Kingdom	2	53	26.5
9	Ziyue Wang	Hohai University, China	2	28	14
10	Zeshui S Xu	Sichuan University, China	2	56	28

To date, Charbell José Chiappetta Jabbour has emerged as the leading figure in GRS research, both in terms of article output and overall citations. His work primarily revolves around the amalgamation of HRM and Environmental Management within organizations (Jabbour & de Sousa Jabbour, 2016; Jabbour & Santos, 2008; Jackson et al., 2011).

5.4. Topic Words in GHRM and Emerging themes in GHRM

Figure 3, utilizing network visualization in VOS viewer, displays the key themes prevalent in GRS. Notable nodes include sustainable development, sustainable organizational performance, green training, green supply chain, and GHRM. The analysis yielded 53 items organized into three clusters. Cluster-1 (23 items), highlighted in red, prioritizes green training with a relevance score of 6.2267. Cluster-2 (17 items), denoted in green, emphasizes green supply chain with a relevance score of 1.5955. Lastly, Cluster-3 (13 items), represented in blue, focuses on quality, earning a relevance score of 0.7738.



Figure 3 Network Diagram of Key themes Prevalent in GRS

The term “green training” was mentioned 15 times, achieving a relevance score of 6.2267, followed by “green recruitment” occurring 18 times with a relevance score of 6.1586. Additionally, “green human resource management” appeared 18 times with a relevance score of 5.9921, and “GHRM” was mentioned 18 times with a relevance score of 5.8181. “Green supplier” emerged 27 times, earning a relevance score of 1.5955. However, terms like “green supply chain” (23 times, relevance score 1.0388), “sustainability” (40 times, relevance score 0.4713), and “sustainable development” (22 times, relevance score 0.244) were also present in the research, indicating a clear relationship between green recruitment and the broader concepts of sustainability and sustainable development. Furthermore, it’s apparent that the majority of research has focused on GHRM, with limited attention given to GRS, which is a fundamental aspect of GHRM (e.g., Jamal et al., 2021; Pham, D.D.T. and Paillé, P., 2020).

Co-Authorship Analysis

The researchers’ connectedness is assessed by analyzing their co-authored publications. In the GRS network, which is divided into 3 clusters, there are a total of 18 researchers, 49 co-authorship links, and 54 total co-authorships. Notably, Jabbour, Charbell José Chiappetta from NEOMA Business School, located in cluster-1 (highlighted in green), has the highest number of co-authorship links (10) and a total of 12 co-authorships across 4 publications. Following closely is De Sousa Jabbour, Ana Beatriz Lopes De Sousa from the University of Lincoln, with 5 co-authorship links and a total of 7 co-authorships spanning 3 publications. In cluster-2 (marked in blue), Ramayah, Thurasamyh from Universiti Sains Malaysia stands out with 9 co-authorship links and a total of 9 co-authorships across 2 publications. Meanwhile, in cluster-3 (marked in red), three scholars, namely Cao, Yu Kun from Northeast Forestry University, and Malik, Saqib Yaqoob from Preston University, have 7 co-authorship links and a total of 9 co-authorships each across 2 publications.

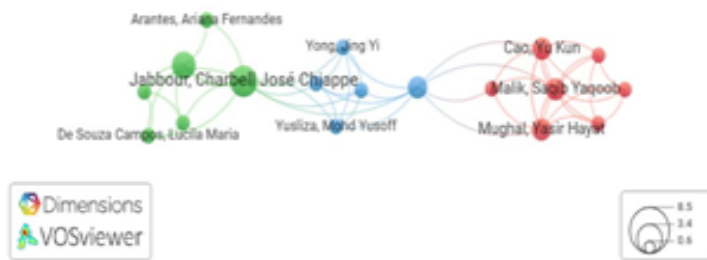


Figure 4 Network Diagram of Co-Authorship Analysis

Citation Analysis

Publication citations refer to the instances when a publication is referenced by other works within the database. These citing publications can encompass various types, including articles, chapters, preprints, or monographs. Citation analysis serves to establish the interconnectedness among researchers, based on how often they reference each other's work. In this analysis, there are a total of 73 researchers who share citations, organized into 9 clusters. This results in 630 citation links and a total of 696 citations across the clusters.

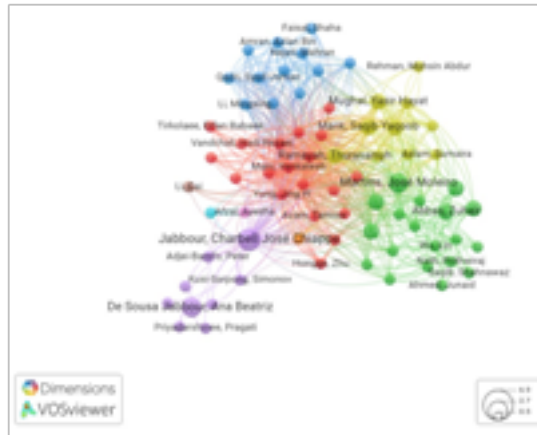


Figure 5 Network Diagram of Citation Analysis

Discussion

Based on data from the Dimensions database, this study conducts a bibliometric analysis of green recruitment scholarship spanning from 2014 to 2023. It delves into research trends and key topics within the realm of green recruitment and selection (GRS), offering insights into past studies, current landscape, and future prospects. The article also suggests utilizing sociograms to assess correlations among variables in green human resource management (GHRM) for theoretical and conceptual model development. While GRS research is still emerging, significant attention has been given to phrases like green sustainable development, sustainable organizational performance, and green training.

Research on GRS is globally distributed, with developed nations such as the United Kingdom and the United States leading, yet over 50% of contributions come from developing countries. Notably, France, Malaysia, China, India, and Pakistan also make substantial contributions. Peterson Charbell José Chiappetta Jabbour, affiliated with EMLYON Business School, emerges as a prominent scholar in this field. The journal "Sustainability" stands out for its significant publications and citations in green recruitment research, highlighting its recent emergence from environmental science to the realm of business and management.

Limitations, Conclusion, and Future Research

In recent years, particularly since 2018, the field of green recruitment has seen remarkable growth, significantly impacting academic literature. This surge in attention underscores the subject's growing importance in both business and academia. With roots spanning 54 nations, green recruitment has garnered global recognition, fuelled by increasing ecological awareness. However, to better understand green recruitment dynamics, future research should focus on cross-cultural and multi-sector studies, given the variations observed between developing and developed countries.

Despite these insights, certain limitations exist. Firstly, this study relies solely on data from Dimensions, potentially omitting relevant sources. Secondly, the presence of researchers with identical names poses challenges. Lastly, as the study specifically targets green recruitment, its findings may not be universally applicable. To address these limitations, future studies could incorporate additional databases like Scopus and Web of Science for a more comprehensive analysis. Moreover, utilizing sociograms can offer deeper insights into the interplay between various factors in green recruitment.

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