

A Bibliometric Analysis of Green Human Resource Management

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Abstract: The purpose of this investigation is to use bibliometric analysis to examine publication trends, citations, top authors, top journals, and top study fields in the framework of Green Human Resource Management (HRM). This study analysed the data from 362 research studies between 2014 and 2024 using the bibliometric review approach. The VOS viewer program was used to analyse the data once it was gathered from the Dimensions database. Only two papers were published in 2014; by 2024, there will be sixty papers, according to the research. Moreover, there has been a significant increase in publications on Green HRM between 2019 and 2023. According to citation analysis, the study has determined the following information: the most significant studies on green human resource management (HRM), the most prestigious journals that publish articles on HRM, the most well-known authors who publish articles on HRM, and the top subject areas that publish research on HRM. This study show that the issue of green human resource management (HRM) is interdisciplinary in nature, as it is linked to fields such as biological sciences, engineering, psychology, and neuroscience, in addition to management and commerce. The review aims to provide scholars with an overview of Green HRM and highlight relevant areas for additional study.

Keywords: Green HRM, Green Human Resource Management, Bibliometric, Citation analysis, Top journals

Introduction: Over the past two centuries, growth in the economy has been an illustration of human prosperity and longevity. But the effects of different industrial processes, as seen in pollution and the buildup of waste and residues, are becoming more and more clear. (IPCC 2018 (Jackson, 2011) . The struggle against extreme weather situations, global policy attempts to limit carbon emissions, and the competitive and regulatory domains are all impacted by climate change. As a result, society has to quickly adapt to new circumstances and get ready for previously unthinkable demographic changes (Winn, 2011). Due to increasing regulatory and public attention, an increasing number of organizational entities are actively adopting measures and strategic adjustments, such as allocating resources to low-CO2 technology and renewable energy, to shift towards environmental sustainability. (González-Benito, 2006). According to Shrivastava (Shrivastava, Sustainability principles: A review and directions., 2010), the idea that this topic is limited to environmental sciences is challenged by the multidisciplinary needed to minimize organizational environmental footprints, resulting in the creation of new management and social research disciplines. Therefore, associated subjects—such as corporate social responsibility (CSR), environmental management (EM), business ethics, socially conscious consumers, and sustainability strategies—have received more attention (Schuler, 2017) (Shrivastava, 2010). Green human resource management (GHR) is one subject that is being discussed more and more in the literature when it comes to addressing environmental challenges (Ari, 2020) (Singh, 2020) (Renwick, 2016). (Khan, 2020)state that researchers examining human resource management (HRM) investigated how HRM may support environmentally friendly results and proposed the term "green HRM." The book "Greening People: Human Resources and Environmental Management" by (Wehrmeyer, 1996)is the first article of written work that connects human resource management (HRM) with environmental management (EM). Although identifying this kind of HRM as "green," the author eventually refers to it as GHRM in the literature. There are situations in which sustainable human resource management and GHRM are used similarly, suggests Gholami (Gholami, 2016), But in the context of sustainable HRM, the Triple Bottom Line (Correia, 2019)which considers people, the planet, and profit

all at once, is a more significant concept. (Kramar, 2014). On the other hand, GHRM focused on the ecological aspect of company activities. According to (Ren, 2018), GHRM is a "phenomenon relevant to understanding relationships between the planning, development, implementation, and effect of HRM systems and organizational activities that impact the natural environment." Aligning company environmental policy with HRM practices is a key component of "green human resource management" (GHRM), a human resource management approach. (Veerassamy, 2023). Employing green HRM techniques may assist businesses in lessening their environmental footprint, enhancing their environmental efficacy, and promoting sustainable growth (Yusliza, 2021). To learn more about the productivity, impact, and trends of green HRM, a bibliometric study of research trends in the field was carried out. According to (Aria, 2017), bibliometric analysis is a quantitative technique used to examine scientific publications and find trends, patterns, and gaps in the literature. His approach focuses on a number of interesting factors, including publications, journals, and authors, that help to define the subject of study. The understanding that environmental sustainability and social responsibility in general are issues for corporate boardrooms as well as being closely related to human resource management is what led to the creation of green HRM (Umrani, 2022). According to Niazi (Niazi, 2023), green human resource management incorporates eco-friendly methods into a range of HR operations, including as hiring, training and development, pay, and employee engagement.

This bibliometric analysis's purpose is to identify and assess the development of comprehensive study that has been carried out in the subject of green human resource management between 2013 and 2023. To assess and measure different facets of green HRM practices and facilitate comprehension of green HRM research, further GHRM bibliometric analyses were carried out. The purpose of this analysis is to give readers an overview of the efficacy of green HRM in different firms and to highlight the work that has been done in this field.

To investigate the volume, development trends, significant journals, pioneer writers, and dimension sectors in Green HRM, a bibliometric study based on the dimension platform was carried out. 362 documents from the dimensions database were reviewed in the research. The VOS viewer software package's visualization of similarities (VOS) mapping approach will be useful in the bibliometric analysis in this paper.

Literature Review:

Green ambidexterity and behavior are used in the study by (Jabeen, 2024) to examine how Green Governance Management (GHRM) affects environmental performance. The study emphasizes the role of responsible leadership in this relationship as well as the mediating function of green ambidexterity and behavior.

The study conducted in 2023 by (Awan, 2023) examines how data-driven culture affects environmental performance and green HRM. It emphasizes how this culture may improve organizational learning capacity and improve environmental performance (EP) by using DDC and OLC.

The 2022 study by (Aboramadan, 2022) examines how Green Governance (GHRM) affects green behaviors among employees in higher education. It finds that GWE mediates the link between GHRM and green outcomes, and is positively affected by GHRM.

(Naz, 2021) investigates how Green House Gas Management (GHRM) affects environmental performance, with a particular emphasis on the psychological environment and behaviors as well as the moderating effect of environmental knowledge.

The study conducted in 2020 by (Mardani, 2020) examines the correlation between purchasing, green training, and customer engagement in terms of SSCM practices, corporate motivations, and firm performance. The restricted implementation of TPB in green SCM models, research limitations, and supplier involvement in green efforts are also highlighted.

In this 2019 study, (Yong, 2019) examines how green IC dimensions affect green HRM in Malaysia, highlighting their critical role in implementing green HRM practices as well as its significance for company sustainability in the manufacturing sector.

In a 2018 paper, (Rawashdeh, 2018) highlights the benefits of greening HRM and its beneficial effects on environmental performance in the Jordanian healthcare industry. He advises investing in sustainable development and training programs, implementing policies moderately—with a focus on recruitment—and enhancing the green incentive structure to encourage environmentally friendly behavior.

(Ullah, 2017) examines the literature on green HRM and highlights important initiatives, areas for development, and unmet research needs. HR professionals face additional obstacles as a result of green HRM, requiring for better policy that better links HR strategy with the needs of the environment.

In the study of green HRM practice, (Hosain, 2016) calls for businesses to include green practices into their operations and strategic choices in order to achieve sustainable social in nature and organizational performance. She focuses on the theoretical and strategic application of green practices in traditional HR activities.

According to (Mehta, 2015), green human resource management (HRM) is critical to sustainable business. It may help establish a "green" culture, ensure compliance, increase productivity, save costs, and improve a company's reputation, revenues, and public relations.

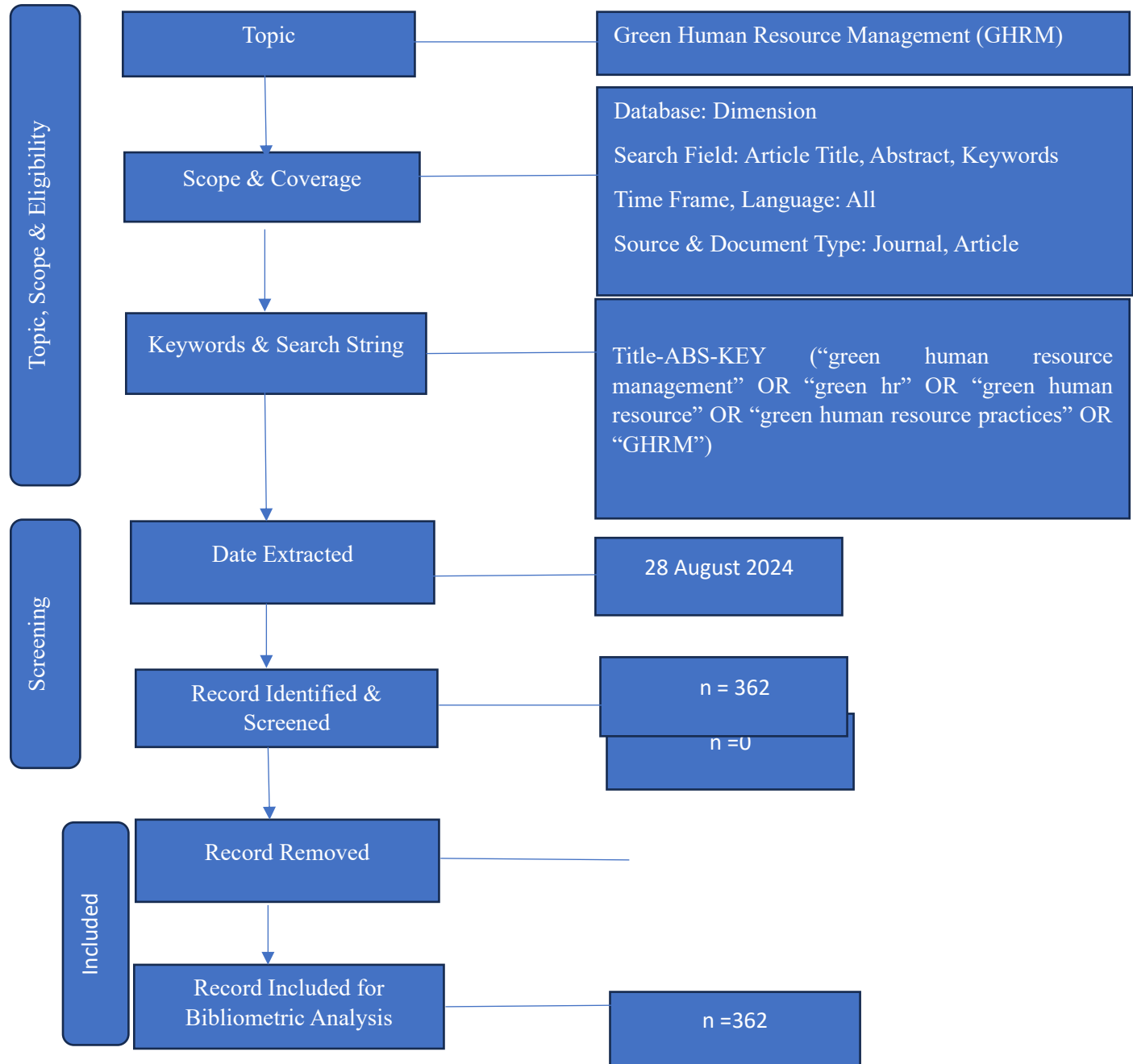
In 2014, (Jabbour, 2014) introduced an integrated framework of GHRM and GSCM, highlighting its importance for supply chains and organizational sustainability. The framework, which focuses awareness to a previously unrecognized relationship between GHRM and GSCM in the literature, suggests a research agenda for successful integration.

Objectives of the Study

The primary objective of this research is to present a thorough bibliometric analysis of green HRM. The achievement of the primary goal is helped by the following specific research objectives.

- 1: To identify the publication trends with respect to time in the field of Green HRM
- 2: To identify the most influential research papers in the field of Green HRM through citation analysis
- 3: To identify the top journals with respect to publications in the field of Green HRM
- 4: To identify the top areas of Green HRM research with respect to publications

Research Methodology: For achieving the objectives, the study has used quantitative research and bibliometric review method. The study has analysed the data of 362 researches published from 2014 to 2024. The data was collected from Dimensions database. Bibliometric analysis is a widely used method for researching the early years of any research topic (Li, 2017). Citation network analysis and publication trends have two among the approaches used in this study. VOS viewer software is used for data analysis. VOS viewer software provides a map in which the relatedness of items can be examined by the distance between them.

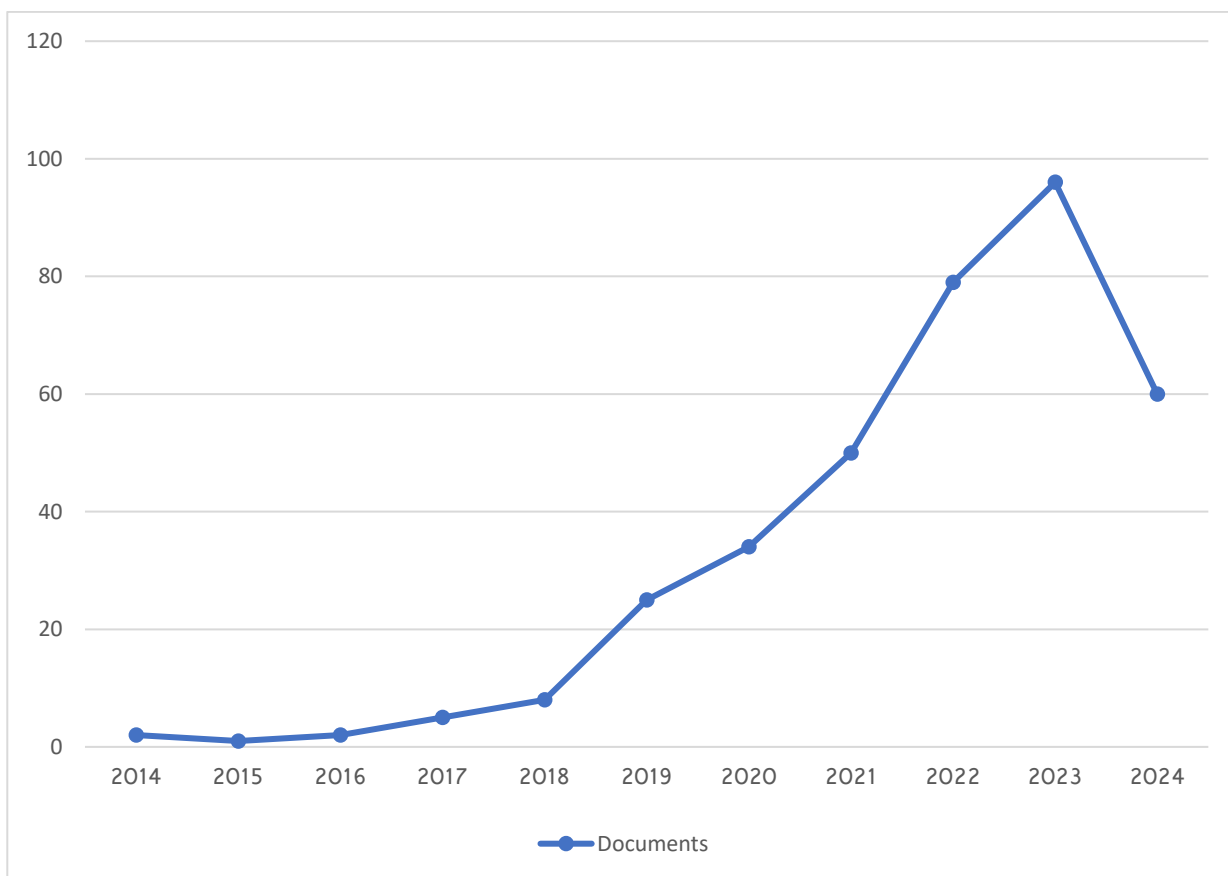


Findings: The findings of the study, with respect to the four research objectives discussed above, are presented below.

Trend of Publication from 2014 to 2024:

presents Dimensions information for Green HRM publications between 2014 and 2024. Publications have increased for instance, from two papers published in 2014 to sixty articles published in 2024. Green HRM publications increased dramatically between 2015 and 2023. Two hundred papers, or sixty five percent of the total, were published over the last three years out of a total of 362 publications. This growing pattern indicates that scholars are noticing the phrase "Green HRM."

Sr. No.	Year	Publication
1.	2024	60
2.	2023	96
3.	2022	79
4.	2021	50
5.	2020	34
6.	2019	25
7.	2018	8
8.	2017	5
9.	2016	2
10.	2015	1
11.	2014	2



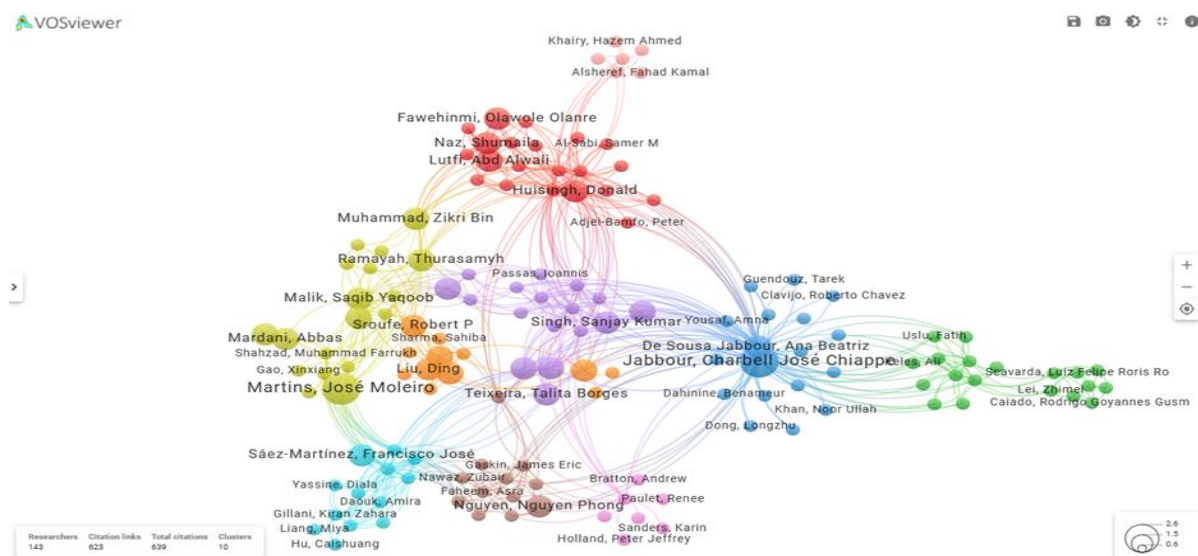
Objective 2:

Top 15 Green HRM studies from the Dimensions database between 2014 and 2024, sorted by number of citations. Citation analysis measures the instances in which a research article has been mentioned by other works to determine the relative value of publications (Waltman & Van Eck, 2012). A paper's citation count indicates how many citations it has accumulated over time. An important research article is one that is more often referenced. One of the greatest ways to map a research publication's effect is through citation analysis (Tsay, 2009). VOSviewer software was used to analyse the data and determine which research publications on Green HRM were the most impactful. The top 15 research publications on green human resource management that have received the most citations between 2014 and 2024 are listed in Illustration 2. Illustration 2 shows that Jabbour has the most citations (785), followed by Sanjay Kumar Singh (590) and Abbas Mardani (467).

Most Influential Research Papers in Green HRM as per Citation Analysis

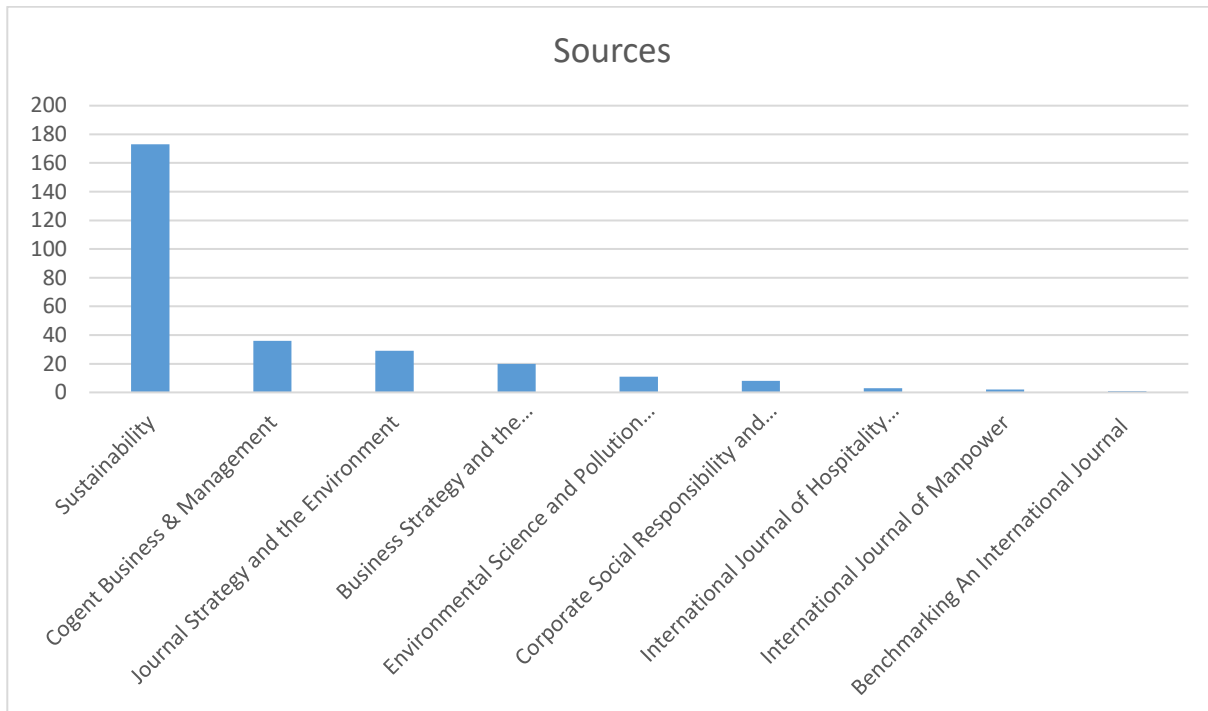
Sr. No	Researchers	Citations
1	Charbell José Chiappetta Jabbour	785
2	Ana Beatriz Lopes De Sousa De Sousa Jabbour	770
3	Sanjay Kumar Singh	590
4	Abbas Mardani	467
5	Donald Huisingh	271
6	Thurasamyh Ramayah	214
7	Saqib Yaqoob Malik	175
8	Yasir Hayat Mughal	175
9	Thorey S Thorisdottir	163
10	Lucía Muñoz-Pascual	121
11	Jesús Galende	121
12	Robert P Sroufe	107
13	Usama Awan	106
14	Xiao-Ming Miao	102
15	Shumaila Naz	69

displays a Green HRM citation network created using Vosviewer's help. In terms of citations, Jabbour (2016) is clearly the most prominent author, as seen in the chart below.



Leading Journals Publishing on Green HRM

This study's third objective was to determine which prestigious publications published the most articles on green human resource management. A total of 362 papers were published between 2014 and 2024, spread across many journals. Figure 4 displays the list of the leading journals that publish on green HRM. Of all articles, 47% have been published in the top 15 journals. The most research publications have been published in the Sustainability.

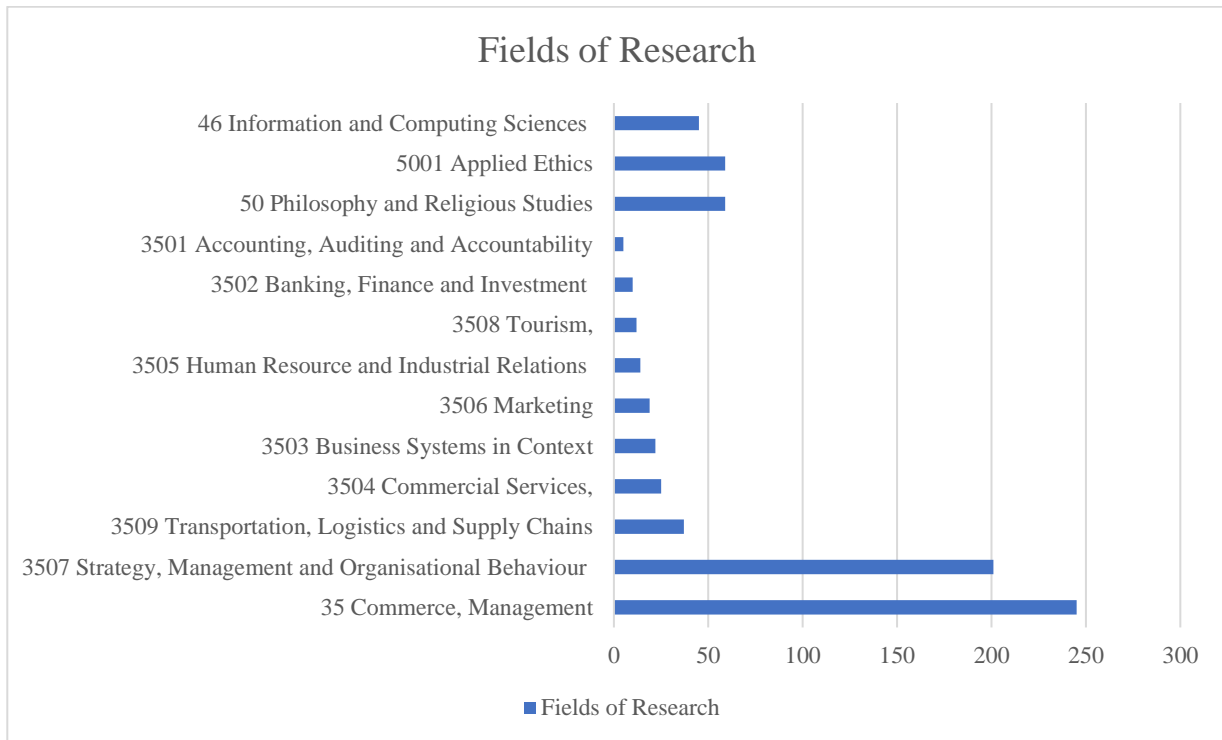


For instance, 3: The most prestigious publications that published articles on green human resource management between 2014 and 2024, taken from the Dimensions database

Top Areas of Green HRM Research

According to instance 4, the fields of Chemical Science, Management, Commerce, and Tourism rank first in terms of research on Green HRM. Illustration 4 demonstrates the connections between the field of Green HRM and disciplines such as computing sciences, philosophy, and religious studies, in addition to management and commerce. This suggests that the field of green HRM is multidisciplinary. The curious fact that there is a lack of literature in other domains, such as accounting, auditing, and accountability, is illustrated in Illustration 4.

Sr. No	Category	Fields of Research
1.	35Commerce, Management, Tourism and Services	245
2.	3507Strategy, Management and Organisational Behaviour	201
3.	3509Transportation, Logistics and Supply Chains	37
4.	3504Commerical Services	25
5.	3503Business Systems in Context	22
6.	3506Marketing	19
7.	3505Human Resource and Industrial Relations	14
8.	3508 Tourism	12
9.	3502Banking, Finance and Investment	10
10.	3501 Accounting, Auditing and Accountability	5
11.	50Philosophy and Religious Studies	59
12.	5001Applied Ethics	59
13.	46Information and Computing Sciences	45
14.	4609Information System	34



For instance, 4: Number of Green HRM publications in top subject areas during period 2014– 2024, retrieved from Dimensions database.

Conclusion and Future Scope:

For both business and academics, the area of green human resource management is crucial. Using information from the Dimensions database, this study has attempted to provide some insight on the bibliometric analysis of Green HRM between 2014 and 2024. By identifying the top writers, top journals, top fields of research, and publishing patterns, this study offers a thorough overview of Green HRM. Databases like Web of Science and Scopus may be used to conduct bibliometric analysis for further investigation.

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