

BIBLIOMETRIC ANALYSIS OF HUMAN RESOURCE MANAGEMENT AND INNOVATION: INSIGHTS FROM A VOSVIEWER

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Abstract

The proposed research topic is one of great importance in the current context of technology development and digitalization worldwide. The global context of recent years has shown us that we have to deal with rapid changes, and adaptability to these changes greatly influences the activity of any organization, especially through the lens of people, without whom no public or private institution could exist. Human resource management is critical to encourage innovation in an organization. Although research addressing the use of innovation in human resource management has been around for many years, this field is always influenced by the evolution of technology and society. This study addresses this lacuna of human resource management uses in promoting innovation in literature. Data from Scopus 850 and Web of Science 788 articles were analyzed. The bibliometric analysis provided significant insights into innovation and the HRM research landscape, particularly concerning key authors and countries. Further, the thematic classification of the extant literature identified the following six major research themes: knowledge management, Industry 4.0, performance management, behavior research, sustainability, and personal training. These findings are used to propose directions for further research in this field on how to integrate innovation and human resource management for organizational success effectively.

Keywords

Bibliometric analysis; human resource; innovation; management.

Introduction

In the last decade, technology and digitization have developed rapidly. Unexpected conditions generated by an external factor such as the pandemic, which made everyday life change, have generated new possibilities for innovation by including new technologies such as AI, Big Data, IoT, or blockchain, even in the field of human resources management (Muscio & Ciffolilli, 2020).

The pandemic has created many challenges for organizations, including business development, low employee motivation, remote work, or unemployment. Human resources is one of the main factors in any institution's formation, development, and implementation of organizational strategies. Effective employee performance and

interaction ensure efficiency, ultimately promoting productivity, sales growth, profitability, and competitiveness in the labor market.

Previously, the literature has focused on the link between HR practices and organizational outcomes such as productivity, flexibility, and financial performance (Mendelson and Pillai, 1999; Collins and Clark, 2003), but the understanding needs to be broadened to include performance innovation (Laursen & Foss, 2003). Organizations strive to incorporate innovations to improve performance and adapt effectively to environmental pressures (Damanpour & Schneider, 2006). Alves et al. (2018) said that implementing innovations does not always result in organizational improvements. This occurs because innovation is not a solitary act but rather a network of coordinated efforts to increase an organization's competitiveness.

What are the "lessons learned" (or lessons that should be learned) from the present global HRM crisis, and how may these lessons affect the future of HRM in terms of developing resilient workforces and organizations? These are some of the questions researchers seek to find answers and solutions by analyzing human resource management's challenges in crises such as the COVID-19 pandemic (Chang et al., 2013; Wright & Snell, 1998).

This article aims to present the most discussed topics in the research field of human resources management, in correlation with innovation in recent years, through a bibliometric analysis of the specialized literature. As said, the objective of the study is: *To conduct a bibliometric analysis of research in the field of human resource management and innovation using VOSviewer.*

Bibliometric analysis enables a comprehensive exploration of the research landscape, providing valuable insights into the evolution of knowledge and emerging trends. Bibliometric scrutiny uncovers key trends, identifies influential works, and informs future research directions by analyzing publication patterns, citations, and co-authorship networks.

The article includes four parts. The first part – the literature review – summarizes the previous findings found in studies regarding the connection between the two concepts discussed: *Human Resource Management* and *Innovation*. The second part - methodology - describes how the bibliometric analysis was carried out. The third part – results and discussion - presents and discusses the main conclusions obtained through the bibliometric analysis research. The fourth part - conclusions - summarizes the article, includes implications for practice, defines the research limits, and makes suggestions for future research.

Literature review

Human resources are workers who work directly for the business; their management is the process or procedures that focus on optimizing employee performance to fulfill the employer's strategic goals (Wood, 1999). Despite the acknowledged importance of human resource management, available research on its involvement in the creation of organizational performance management models is still in its early stages (Bourne et al., 2018; Sardi et al., 2019). Human resource management, defined by Armstrong

(2001), is a strategic approach to the company's decision-making and planning process in relation to employees and strategies that integrate policies and actions related to recruitment, training, development, performance management, reward, and employee relations, both horizontally and vertically with each other and with the company's strategy.

Although earlier research has focused on the influence of HR practices on organizational results, few studies have examined their impact on knowledge management and innovation performance (e.g., Currie and Kerrin, 2003; Laursen and Foss, 2003). Using a case study approach, Currie and Kerrin (2003) investigate the impact of strategic human resource practices such as performance management, recruitment and selection, employee interaction, and career development on improving organizational knowledge sharing. They contend that HR strategies can improve knowledge sharing in organizations with a functioning organizational structure and culture.

Most human resource management literature focuses on traditional issues like human resource performance management strategies and employee performance evaluation, described as "the process by which we evaluate an employee's individual performance over time" (DeNisi & Smith, 2014). However, this research rarely provides approaches for building effective management and organizational performance evaluation systems (Sardi et al., 2020a). Similarly, solutions that integrate these principles that characterize human resource management and may promote an increase in organizational performance, sustainability, and the attainment of medium and long-term goals are challenging to discover in today's study.

The new challenges society faces in the last century, such as economic crises, globalization, rapid population growth, climate change, pollution, the pandemic and even the start of a new war, have made it necessary for organizations to adapt to meet the market's demands continuously. Even though examining such factors is beyond the scope of this conceptual paper, three important elements influencing human resource management departments, the effects of COVID-19, climate change, and technological advances, are worth mentioning.

Climate change can lead to important changes in organizations' human resource management functions through the emergence and adoption of Green Human Resource Management. It was defined as a set of "relevant phenomena for understanding the relationships between organizational activities that have an impact on the natural environment and the design, evolution, implementation and influence of human resources management systems" (Ren et al., 2018, p. 778). Green HR management involves all the classic HR functions. As Guerci et al. (2016) argue, for example, a focus on environmental sustainability in human resource management can be reflected in employee selection by including interview questions that focus on environmental sustainability issues or training by improving employees' understanding of the importance of sustainability and motivation by offering rewards and recognition for promoting employees' green activities. The application of this new style of management that takes into account the global problems of climate change in public organizations is not yet sufficiently developed either at the international level or in Romania, being part of the human resources management strategies that can be developed and can be of interest also for future researchers.

Technological advancement is another critical aspect impacting human resource management operations. Automation, gamification, sensor use, artificial intelligence (AI), and data analytics are all examples of how technology is increasingly altering the future of work. (Connelly et al., 2021; Harney & Collings, 2021). As various experts have pointed out, it is unclear what the impact of these technological advancements will be; they may just assist firms in making better decisions by utilizing human capital analysis (Minbaeva, 2018), or technical improvements may lead to substantial ethical arguments, such as the loss of low-skilled employment owing to automation or the ethical difficulties highlighted by maintaining employee data confidentiality. (Connelly et al., 2021; Harney & Collings, 2021). Organizational needs for workforce knowledge and skills are evolving due to technological improvements (Roumpi & Delery, 2019), as are the nature of human resource management techniques such as recruiting and training (Stone et al., 2015; Stone & Deadrick, 2015).

Akther, Mamun, and Azad (2022) conducted a thorough bibliometric examination of the enormous Human Resource Management (HRM) literature corpus from 1981 to 2019. Their research uncovered some significant discoveries that shed light on the evolution and trends in HRM research. Notably, the study found five distinct streams in trending papers: safety challenges, HRM technology, business model and HRM, information and knowledge management, and HRM and collaboration.

The bibliometric study by Akther, Mamun, and Azad (2022) not only offered a complete review of HRM literature but also laid the framework for future improvements in the subject. Their findings point to numerous possible directions for future HRM studies. To begin, they advise that future academics focus more on human capital, multinational corporations, corporate social responsibility, and career development possibilities to design understandable HRM policies that ensure work satisfaction and job security. Second, they recommend that the researchers combine information technology and behavioral science to distribute learning and knowledge across stakeholders.

According to the bibliometric research carried out by Palos-Sánchez et al. (2022), the integration of Artificial Intelligence (AI) has emerged as a topic of developing importance in the area of Human Resource Management. Their data show a significant shift in the use of AI within HRM, with the previous five years seeing a substantial increase in publications, peaking in 2021. This surge in interest, however, appears to be accompanied by remaining fears and roadblocks to fully realizing AI's promise in HRM. Notable obstacles include the complications related to HR issues, data challenges, equality and regulatory limits, and employee emotions. Despite AI's potential to revolutionize HRM, it appears that HR departments may still struggle with preparation and successfully utilizing this disruptive technology.

The gap identified is the need for a clear picture regarding the link between HRM and innovation in the literature. In our opinion, HR has a vital role in innovation. However, we should find out the most used concepts related to HRM and innovation and the evolution of the scientific interest reflected in publications. We conducted a bibliometric analysis, which will be presented next, to better understand researchers' approach in recent years, the influences observed in research directions, and how human resource management, in conjunction with innovation, is addressed in the academic environment.

The main objective of this research is to provide an in-depth evaluation of current trends at the interface of Human Resource Management (HRM) and innovation, with the overriding goal of developing a comprehensive future research agenda. This is accomplished by a thorough bibliometric study that elucidates the existing landscape and aims to uncover research gaps and possible pathways for academic investigation. The study aims to provide significant insights that will guide and inspire future research initiatives in this dynamic and changing sector, enabling a better understanding of the complex interplay between HRM and innovation.

Methodology

Pritchard (1969) introduced the bibliometric analysis. Since then, it has gained ground as a scientific tool for understanding the temporal development of a topic from a multi-disciplinary viewpoint (Bhatt et al., 2020; Caviggioli & Ughetto, 2019). Bibliometric analysis facilitates a comprehensive understanding of a research area, mapping its boundaries and identifying influential authors and new directions for future research (Donthu et al., 2020).

The bibliometric method was chosen for this study because of its capacity to establish the intellectual structure of a topic without subjectivity (Xue et al., 2018). This form of analysis and the science mapping technique are both helpful in objectively assessing the evolutionary tendency of research investigations and have been successfully employed in previous business literature reviews (Dabic et al., 2014; Garengo & Sardi, 2020). As a result, our research focuses on understanding how research is geared toward current trends in human resource management, how innovation is incorporated into HR, and the relevance of these concepts in academia worldwide.

This study intends to highlight the most popular concepts tackled by scholars in connection to human resource management in the previous five years, as well as to examine worldwide interest in this topic. The methodology chosen for this paper is similar to that of Khanra et al. (2020).

To achieve the study's objectives, we used a two-step strategy to identify the publications to be evaluated and reviewed. The initial step was establishing acceptable search phrases for mining the Scopus and Web of Science databases for relevant publications. This database was chosen because of its extensive coverage of peer-reviewed research in respectable publications and its widespread presence in the academic community (Caviggioli & Ughetto, 2019; Donthu et al., 2020). In the second phase, we used specified criteria to identify which publications should be included in our bibliometric and content analysis database.

To conduct this bibliometric study, the keywords "human resource management" and "innovation" were used to define the base of investigated papers. To determine the database, we used these keywords in a conducted search in both Scopus and Web of Science, forming two databases used in parallel in this research.

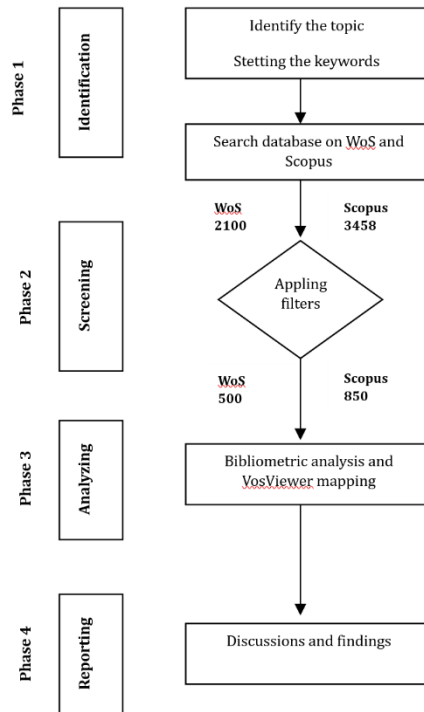


Figure 1. Overview of the methodology
(Source: Authors' own research results)

An exhaustive search strategy was meticulously devised to comprehensively explore the scholarly discourse at the intersection of Human Resource Management (HRM) and innovation. This strategy involved harnessing the power of multiple bibliographic databases to ensure the breadth and depth of coverage in the literature. The first database, Web of Science, was employed with the search terms "Human resource management" and "innovation," yielding an initial pool of 2120 articles. Concurrently, a similar search was conducted in Scopus, constituting the second database, which produced 3458 initial results using the same search terms. To meet the criteria of recency and relevance, articles had to be authored within the last five years and classified within the categories of "management," "business," "economics," or "social sciences." Following the meticulous application of these filters, the final results were refined, resulting in 500 articles from the Web of Science and 850 from Scopus, ultimately forming the foundation for the subsequent analysis and synthesis of the literature in this study.

An advanced analytical technique was used to dive further into the complicated web of scholarly debate at the junction of Human Resource Management (HRM) and innovation. Aside from the initial database curation, one important stage in our process was to expose the two databases, Web of Science and Scopus, to the rigorous inspection of VOSviewer software. This sophisticated technology aided in investigating co-authorship connections, yielding vital insights into the field's collaborative dynamics. We could identify not only the prolific writers contributing to this discourse but also the geographical origins of these joint initiatives, shining light on the global distribution of knowledge, thanks to the capabilities of VOSviewer.

In addition, our analytical methodology went beyond authorship analysis. VOSviewer was used to decipher the complexities of keyword co-occurrence, revealing the key concepts and notions pervading the literature corpus under consideration. This multidimensional approach revealed not just the collaborative networks and transnational features of HRM and innovation research but also the main subjects and concepts that shape this intellectual landscape. Our study strives to present a holistic and complete view of the nexus between HRM and innovation by combining these varied elements of analysis, drawing on the collective experience of scholars and practitioners worldwide.

Results and discussion

The next part serves as the gateway to an in-depth exploration of the findings and subsequent discussions resulting from an exhaustive bibliometric analysis in our pursuit of a comprehensive understanding of the complex academic literature at the intersection of Human Resource Management (HRM) and innovation. The research, which was precisely coordinated using VOSviewer software, contributes to the academic discourse by highlighting the complex structures of collaboration and the basic thematic foundations inside this conceptual dimension.

The preceding sections methodically described the methodological planning, in which two significant bibliographic databases, Web of Science and Scopus, were wisely combined to create a representative corpus of contemporary and relevant studies. The resulting use of VOSviewer software provides a comprehensive lens, providing insight into the development of this discourse through co-authorship analysis and depicting the fluctuating nature of intellectual discussion through keyword co-occurrence mapping.

The insights presented here go beyond simple statistical abstractions; they are the foundations upon which the knowledge framework is created. This analysis allows not only for a thorough understanding of recent discourse but also for charting a roadmap for the future. As a result, human resource management and innovation are positioned as critical in building organizational landscapes and accelerating revolutionary change. The Web of Science database underwent a comprehensive co-occurrence analysis utilizing VOSviewer software. Initially, this analysis identified a total of 2,173 distinct keywords. To ensure the relevance and significance of the identified keywords, a minimum occurrence threshold of 10 was set, refining the keyword pool to 107 keywords that met this criterion. Subsequently, a meticulous review was conducted, eliminating keywords repeated in similar forms and retaining those demonstrating the strongest semantic connections within the dataset. This meticulous curation yielded a coherent co-occurrence map, artfully encapsulating the intricate relationships among the selected keywords. Remarkably, the resulting map revealed a structured landscape partitioned into five distinct clusters, each emblematic of specific thematic domains. The visual representation of this map (Fig.2), which we present in the following section, serves as an invaluable resource for comprehending the nuanced interplay of ideas and concepts that define the discourse at the confluence of Human Resource Management and innovation within the Web of Science database.

The Scopus database, mirroring the rigor applied to its Web of Science counterpart, underwent an extensive co-occurrence analysis facilitated by VOSviewer software.

This research initially revealed a large corpus of 4,598 different keywords. A strict minimum occurrence criterion of 10 was used to assure precision and salience in our research. Because of this prudent application, the keyword pool was refined to 107 terms that exceeded the set threshold. Following that, an elaborate keyword validation procedure was carried out with the goal of removing duplicates and maintaining only those demonstrating substantial semantic links within the dataset. This painstaking curating process resulted in the construction of an illuminating co-occurrence map, which captured the complicated network of keyword relationships. This map shows an organized landscape divided into six clusters, each containing distinct thematic aspects. Fig.3 provides a graphic depiction of this map, serving as a visual key to deciphering the complicated interaction of ideas and concepts that constitute the field of Human Resource Management and innovation inside the Scopus database.

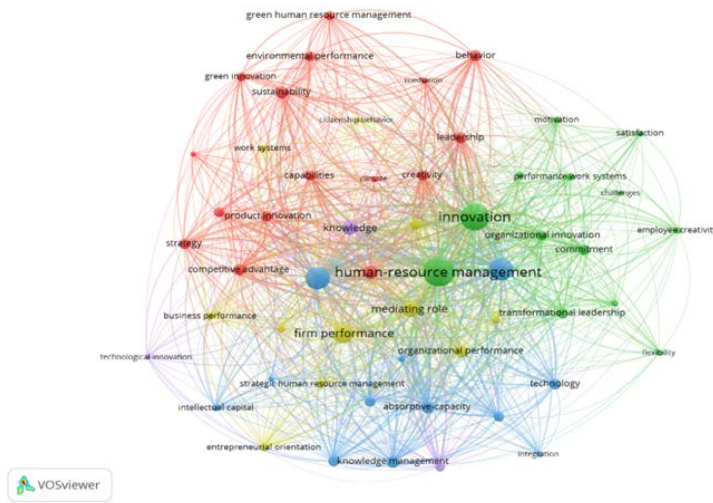


Figure 2. Co-occurrence - Web of Science database
(Source: Authors' own research results)

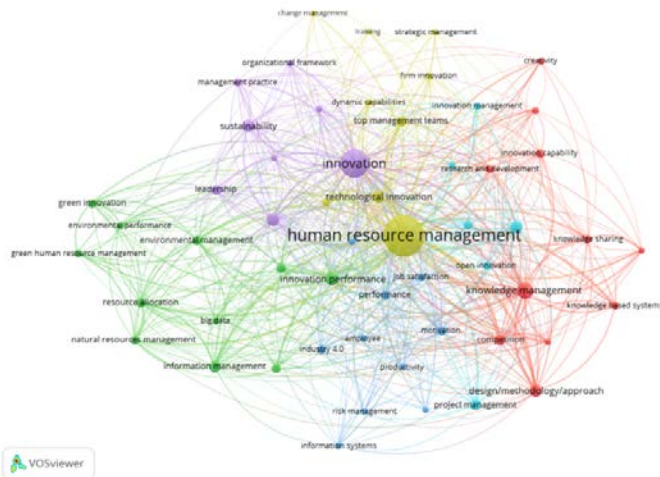


Figure 2. Co-occurrence - Scopus database
(Source: Authors' own research results)

Table 1. Comparison of the first keywords from the databases
(Source: Authors' own research results)

	WEB OF SCIENCE			SCOPUS		
	Keyword	Occurrences	Total link strength	Keyword	Occurrences	Total link strength
1	Human resource management	259	1683	Human resource management	459	1631
2	Innovation	231	1418	Innovation	222	835
3	Impact	154	1044	Knowledge management	76	405
4	Performance	161	992	Managers	54	251
5	Mediating role	82	609	Sustainable development	46	243
6	Knowledge	63	435	Technological innovation	42	214
7	Systems	56	405	Decision making	42	194
8	Absorptive-capacity	47	345	Sustainability	40	189
9	Knowledge management	45	324	Innovation performance	40	184
10	Competitive advantage	41	321	Information management	36	168
11	Sustainability	46	285	Environmental management	24	156
12	Research and development	37	268	Top management teams	28	129

As we go deeper into the co-occurrence analysis of terms in the Web of Science and Scopus databases, it becomes evident that small variations in the definition of thematic clusters may appear. This variation can be attributed to the databases' unique composition and emphasis and the constantly shifting character of research trends. While such differences may seem difficult initially, they provide a tremendous opportunity for scholarly discourse and future research.

Certain keywords emerge within these broad clusters, with significant implications for future research at the intersection of innovation and Human Resource Management (HRM). The resonance of "knowledge management," "Industry 4.0," "firm performance," "behavior/behavior research," "sustainability," "personal training," and "motivation" stands out among these terms. These constructs highlight crucial pathways for investigation and imply that examining the complicated interplay between these characteristics has enormous potential to further our understanding of how to successfully combine innovation and HRM for long-term organizational success.

The bibliometric analysis of co-authorship provided significant insights into innovation and the HRM research landscape, particularly concerning key authors and

countries. The study found *China*, the *United States of America*, and the *United Kingdom* to be the countries with the greatest number of publications on innovation and human resource management, demonstrating their considerable contributions to the area. Several European countries, including *Spain*, *Portugal*, and *Italy*, also produced significant research on this subject. Surprisingly, the analysis revealed a predominance of renowned researchers from Asian countries, emphasizing the *worldwide nature of innovation and HRM research*. These findings highlight the different viewpoints and cooperation across continents, offering insight into the cross-cultural flow of information and best practices at the crossroads of innovation and human resource management.

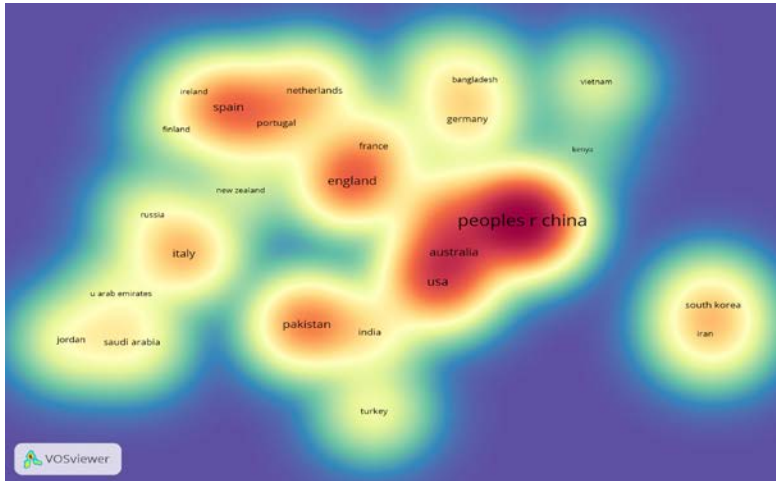


Figure 3. Co-authorship country - Web of Science database
(Source: Authors' own research results)

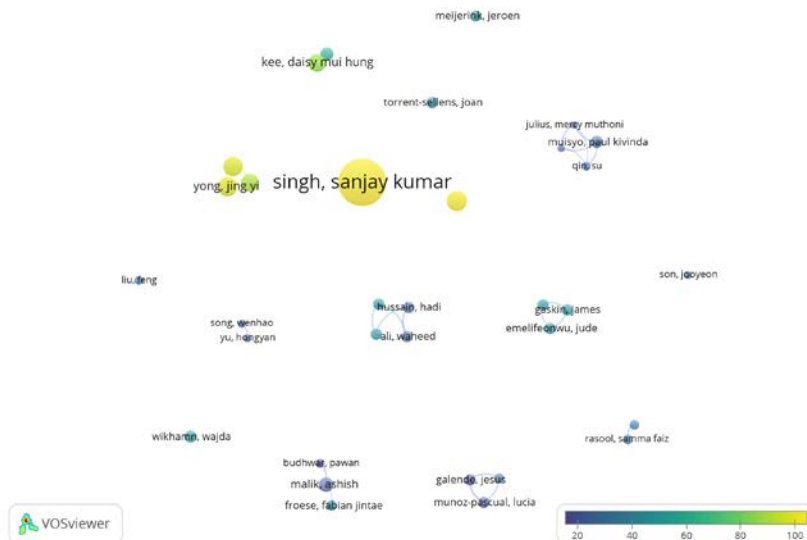


Figure 4. Co-authorship - Web of Science
(Source: Authors' own research results)

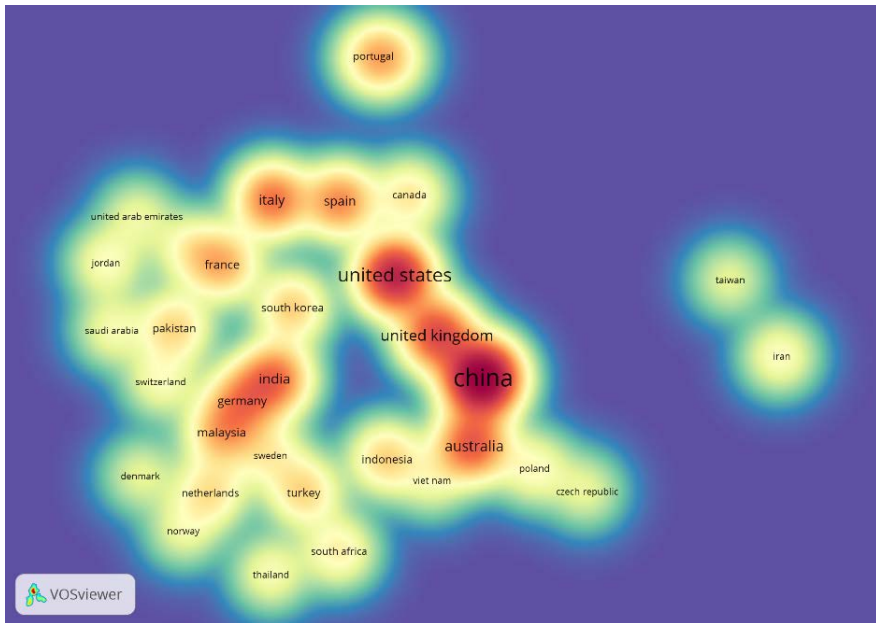


Figure 5. Co-authorship by country - Scopus database
(Source: Authors' own research results)

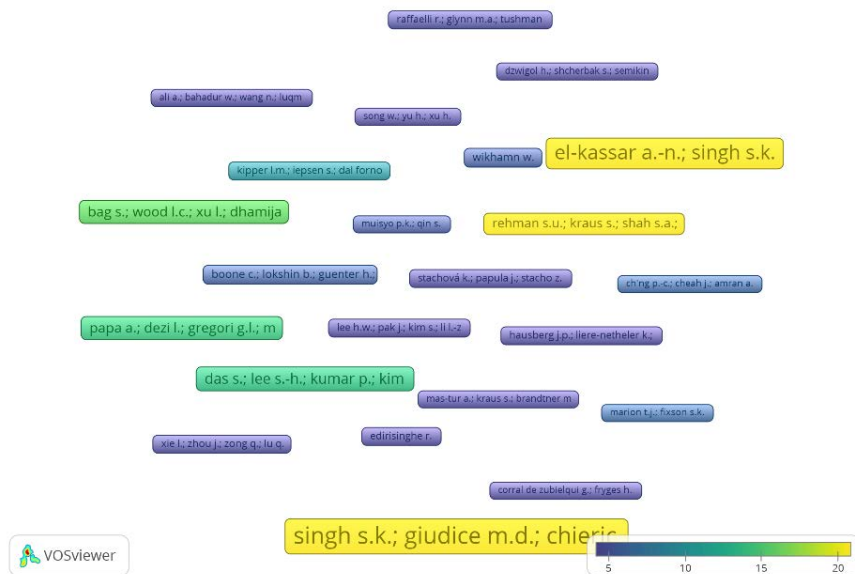


Figure 6 Co-authorship - Scopus database
(Source: Authors' own research results)

Table 2 - Comparative data of co-authorship by country
(Source: Authors' own research results)

Web of Science				Scopus				
	Country	Documents	Citations	Total link strength	Country	Documents	Citations	Total link strength
1	China	125	1479	101	UK	66	756	80
2	UK	48	556	66	USA	93	1135	80
3	USA	50	877	62	China	136	1186	77
4	Pakistan	43	610	59	Italy	51	1432	54
5	Australia	43	589	46	Australia	59	817	50
6	Malaysia	29	550	36	Germany	38	482	49
7	Saudi Arabia	15	266	29	France	33	849	39
8	Italy	30	1226	25	Pakistan	26	418	38
9	France	17	806	20	Malaysia	34	289	36
10	Spain	40	499	20	Spain	44	541	32
11	Germany	19	307	20	India	50	511	30

Our bibliometric analysis identifies two critical study topics at the interface of innovation and HRM. The research highlights the increased interest in determining how innovation and HRM practices collectively affect corporate performance. This study area aims to uncover the factors that promote organizational performance, providing insights to help guide strategic decision-making. Second, the study demonstrates a growing emphasis on integrating HRM and innovation with *Industry 4.0 technology*. This new topic investigates how firms may use cutting-edge technology to improve HRM strategies and drive innovation, paving the path for greater efficiency and productivity in the digital age.

In addition, our study highlights two other key characteristics of this scholarly ecosystem. When paired with innovation and HRM, *sustainability strategies* present an intriguing subject for inquiry. Researchers can investigate how firms might balance these three factors to meet environmental and social obligations while being competitive. Finally, the bibliometric study emphasizes the importance of *knowledge management in fostering creativity*. It is critical to understand how businesses may successfully capture, share, and employ knowledge resources in the context of innovation and HRM. This knowledge-driven strategy can help firms achieve long-term development and competitiveness by creating an atmosphere favorable to continual innovation.

Conclusions

This study found considerable overlaps between our bibliometric investigation and current literature, notably in the domains of (HRM) and innovation. The shifting HRM environment, as noted by Akther et al. (2022) and Palos-Sánchez et al. (2022), highlights the many components that need academic attention and strategic consideration.

One important point of convergence is the growing interest in understanding the combined impact of innovation and HRM on organizational performance. In line with Akther et al. (2022), our findings stress several HRM research streams, including safety issues, HRM technologies, and business models, with a significant emphasis on corporate performance. This emphasizes the important significance of strategic HRM in attaining organizational performance, as well as the importance of innovation and HRM in larger corporate objectives.

Another area of common interest is the combination of HRM, innovation, and technology. Our research highlights the rising importance of merging HRM and innovation with Industry 4.0 technology, echoing the results of Palos-Sánchez et al.(2022) on AI adoption in HRM. This alignment emphasizes technology's role as a transformational force changing traditional HRM approaches.

Both studies agree on the significance of sustainability programs when paired with innovation and human resource management, underlining the necessity for a balanced approach to fulfilling environmental and social obligations while remaining competitive. This is consistent with the larger thematic emphasis on corporate social responsibility emphasized by Akther et al. (2022).

A unifying thread is the importance of knowledge management in encouraging innovation. Akther et al. (2022) and our study acknowledge the critical significance of knowledge resources in HRM, recommending knowledge-driven strategies for long-term growth and competitiveness. Their advice to mix information technology with behavioral science is consistent with our understanding of knowledge's function in enabling innovation in HRM situations.

Our study's detailed bibliometric analysis has exposed critical research gaps in the fields of Human Resource Management (HRM) and innovation, building on the insights gained from the comparative analysis described previously. As discovered, these gaps confirm the developing nature of HRM practices and highlight the pressing need for additional studies. This study's extensive bibliometric analysis identified significant research gaps in the domains of Human Resource Management (HRM) and innovation, highlighting areas suitable for additional investigation. First and foremost, there is a clear need for in-depth research on the design and effectiveness of *personal training* programs in HRM and innovation. This research has the potential to give critical insights into personalizing training activities to improve inventive capacities.

Second, a thorough investigation of the *motivating elements* influencing innovation engagement is required. Understanding these characteristics and their consequences for HRM practices has the potential to develop an organizational culture of innovation and adaptation. Furthermore, *behavior analysis* may provide useful insights into the

complexities of innovation adoption processes by concentrating on individual and team behaviors in adopting and implementing innovation. Finally, the European dimension emerges as a distinct area of interest, necessitating research into the factors that contribute to regional research disparities, such as barriers, collaborative opportunities, and strategies for European researchers to amplify their impact in the realms of innovation and HRM. These discovered research gaps indicate intriguing directions for future study in this developing topic.

Our findings reinforce the importance of bibliographic approaches, notably the usage of VOSviewer, in understanding the research landscape of human resource management and innovation. The capacity of VOSviewer to build visualizations based on keyword co-occurrence and co-authorship broadens our comprehension of this complex area.

Finally, the topic of HRM innovation remains open for investigation, particularly given the disruptive implications of new technologies and the increased emphasis on sustainability. Adopting new technologies into human resources management procedures, alongside a concerted focus on sustainability, represents an ideal environment for future research. Investigating the interplay of innovation, sustainability, and technology in human resource management can potentially change the course of organizational growth in the digital era.

Despite the comprehensive nature of our bibliometric analysis, it is essential to acknowledge certain limitations that may impact the generalizability of our findings. Firstly, our study primarily relies on data retrieved from two prominent bibliographic databases, Web of Science and Scopus, which, while extensive, may not encompass the entirety of relevant literature in the field of HRM and innovation. There could be additional valuable research contributions outside these databases that our analysis did not capture. Furthermore, as with any bibliometric analysis, keyword selection has potential biases despite our rigorous criteria. The inherent variability in authors' keyword choices and indexing practices across different journals and disciplines may introduce some level of subjectivity into our results. Finally, while VOSviewer gives useful insights about keyword co-occurrence and collaboration, it does not assess the articles' quality qualitatively. As a result, comprehension of certain issues and themes within HRM and innovation remains restricted. These limitations should be considered when interpreting our findings, as they emphasize the need for more qualitative research and a more extensive range of databases in future investigations.

Future research on the dynamic alignment of Human Resource Management and innovation has the potential to fill considerable gaps shown by this extensive bibliometric study. In-depth research into the design and efficacy of tailored training programs within HRM and innovation settings are key areas of inquiry, providing essential insights for improving training techniques to boost innovative capacities. Furthermore, a detailed examination of the motivational elements impacting innovation engagement will lay the groundwork for developing creative cultures inside firms. Behavior analysis, which examines individual and team behaviors in adopting and implementing innovation, can provide light on the intricacies of these processes.

In conclusion, this study points out the dynamism and complexity of HRM and innovation research, demanding both researchers and practitioners to embrace these

changing borders while addressing the identified research gaps to encourage long-term development, adaptability, and competitiveness in today's organizational landscape.

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