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Reinvigorating Human Resource Management through Cloud Computing: A Systematic Review of Literature and Bibliometric Perspective

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The landscape of elastic infrastructure of IT is reshaped by Cloud Computing, a transformative technology. Widely discussed across global enterprises, this study delves into the research contributions within the areas of Human Resource Management (HRM) from the period 2013–2023, offering a systematic review of literature to pinpoint existing gap areas and chart future research directions. The present research sourced the data from Web of science database and employs the keywords such as "Cloud computing" and HRM" and primarily focused on the final articles published in journals. Various bibliometric parameters including the yearly distribution of the papers, status of articles and publication counts are encompassed in the research paper. Utilizing VOS viewer, co-occurrence maps of author keywords/terms, citation analysis, and bibliographic coupling were conducted. Moreover, the paper outlines forthcoming research agendas in this domain. Beyond merely identifying gaps in Cloud Computing literature, this study also examines managerial trends and interests, evaluating the potential benefits of cloud computing in HRM. The findings endeavor to assist management in integrating cloud computing into HR departments, enhancing decision-making processes. Consequently, these insights could serve as a blueprint for global managers and policymakers, particularly in the realm of information management, bolstering organizational competitive advantages through cloud computing adoption in HRM.

Keywords: Bibliometric, HRM, PRISMA, VOS viewer, WOS database

Introduction

Cloud computing and Human Resource Management (HRM) are two important fields that have gained significant attention in recent years. Cloud computing has revolutionized the way businesses store and access data, while HR practices have evolved to keep pace with changing workforce dynamics. The modern era is witnessing a significant spark in technological revolution. This period is characterized by the progression of computer technology alongside various other advanced technologies. These innovations aid individuals in accomplishing tasks more efficiently and promptly. Among these technologies, Cloud Computing stands out as a catalyst for a paradigm shift in the domain of flexible IT infrastructure. Widely acknowledged by industry analysts, Cloud Computing has become a ubiquitous topic of discussion among companies worldwide. Despite its long-standing presence, spanning over a decade, the concept of "cloud computing" remains as relevant and influential as ever. Given its myriad benefits, no industry has been immune to its allure. With the advancement of personnel management informatization, there is a growing need for statistical data analysis. Consequently, there has been a noticeable rise in the optimization of data processing, contributing to the evolution of HRM design and development.[1]

To keep in pace with complex environment marked by globalisation and fast changes, performance restrictions and a knowledge driven and based[2,3] economy, Human resource management in the organisations has witnessed a significant shift. Additionally, Information technology has percolated in all aspects of management.[4] The pace of Internet penetration have further added to the way eHRM is making its way in enterprises.[5] Very importantly, the smalls and large enterprises are able to achieve the like management due to cloud computing like phenomena in place.[6]

The influence of cloud computing on HR technology has been profound. It has been witnessed that increasingly, businesses are shifting to cloud based solutions for facilitating cloud-based HR solutions, leveraging their functionalities to enhance human resource management and achieve cost savings. Globally, the adoption of HR cloud platforms

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is enhancing the productivity and efficiency of the organisations.[7] The HR professionals can serve as catalysts and enablers to encourage firms to adopt tech- based solutions in businesses to enable for smoothening the various HR operations at work.[8] It can be seen that adoption and usage of cloud computing in HR functions is still in infancy.[8] It has emerged as the most vibrant aspect of today's world that enables storage, managing and processing.[9]

Inspite of the prevalence of social media and online recruitment, most Human Resources departments have still not aligned with the novel technologies or adopted Cloud-Based Computing for HR activities such as interviewing, screening, and performance evaluation, Human Resources are still apprehensive about the usage and standardisation of cloud based computing in traditional systems.[10–12] With the advent of cloud, a wide amount of information can be accessed over the network of service providers.[13,14]

Cloud computing is supplanting conventional software installations, revolutionizing business operations, and augmenting the value of companies.[13] Despite the widespread agreement addressing significant challenges that can have an impact on Human Resource Management (HRM) functions and the overall productivity of the organisations, HR professionals are apprehensive and hesitate to make use of cloud computing in traditional HR processes.[15]

A notable surge has been experienced in the research on cloud computing and HRM, focusing on the future advancements and progress. Despite enormous research on cloud computing and HRM, there appears to be a gap in the literature mapping the field of study. This study is an attempt to comprehend the present state of HRM and cloud computing to delve deeper into the subject. The study includes meticulous examination of past trends and deliberates on identifying and exploring future research agenda. The research also aimed to gauge the benefits that cloud computing offers in managing human resources.

Theoretical Underpinnings

Cloud computing is the use of remote servers to save, manage and process the data.[16] It is espoused that there are several features attributed to cloud computing such as demand of self service, pooling of resources, elasticity and measured service.[17] These benefits help the organisations quickly access the resources without investing heavily on the infrastructural cost of IT. It is claimed that HR processes and systems can be made more efficient using cloud computing as employees can access any data from anywhere at any time with the benefit of increasing and enhancing productivity and cost efficiency at the same time.[18] Moreover, further added that cloud computing in HR can be highly instrumental in enhancing the talent management practices such as recruitment and selection of employees.[19] In nutshell, cloud computing can benefit the organisations in smoothening their HRM processes in an efficient manner.

One of the themes that emerged during the review of literature highlighted the challenges linked with usage of cloud based HR. It is espoused that experiencing control over the systems based on the cloud would be a herculean task, as the systems may not be customised as per the requirement of the users.[20] It is highlighted that security and privacy are among the biggest challenges associated with cloud based systems.[17] Beside the challenges highlighted in several studies, some studies highlighted the opportunities that lie underway. Researchers highlighted how cloud based systems can help organisations work on employee experience management by facilitating them with adequate and accessible data[18] and the facilitation of recruitment and selection of employees.[21]

Another important aspect that underpins the linkage of HR and cloud computing is the adoption of technology. It is impacted by several factors including the perceived usage, perceived use and social influence.[22] The perceived usage and usefulness were highlighted as the significant predictors of adoption of technology especially with reference to India.[23] It is claimed that there are a whole host of benefits bestowed by cloud based systems over the traditional HRM information systems.[24] These include customised software solutions, reduced expenditure and less need for dedicated IT staff as cloud based systems support the access via web browser and therefore there is no need to buy and maintain the software and hardware. Research suggests that cloud based HRMIS solutions are picking up and the transformations are encouraging the small and medium organisations to switch to cloud based HR.[1] Studies have shown that these systems can improve the efficiency and effectiveness of HR functions.[25] They also highlighted that adoption of HRMIS based systems can facilitate more accurate and timeliness in data, improved decision making and better results. Some important findings of the research papers with year and sources are given in Table 1.

The key findings from various research papers and articles on the intersection of Human Resources

Table 1 — Research papers with title; authors; year; source and findings

Title	Year	Findings
"Feasibility of implementing human resource payroll management system based on cloud computing"	2022	The attractiveness of capability and acceptance dimensions correlates with the fundamental criteria necessary for integrating cloud computing technology within an organization. Consequently, it is imperative to assess the viability of implementing cloud computing systems within companies.[26]
"Cloud computing in construction industry: Use cases, benefits and challenges	2021	The research emphasizes that cloud computing serves as a catalyst for driving innovation across various emerging technologies, such as building information modeling, IoT, virtual reality, augmented reality, and big data analytics within the construction sector.[27]
"Analysis of challenges in sustainable human resource management due to disruptions by Industry 4.0: an emerging economy perspective"	2021	The foremost priority lies in addressing the challenge of performance appraisal, closely followed by learning and development initiatives. This underscores the critical necessity of ensuring job security and providing ongoing learning opportunities for employees amidst the disruptive forces of Industry 4.0.[(28)]
"A study on the influencing factors of cloud-based human resource management system adoption"	2016	With the advancement of personnel management informatization, there is a growing need for statistical data analysis. Consequently, there has been a noticeable rise in the optimization of data processing, contributing to the evolution of HRM design and development.[1]
"Cloud sourcing and innovation: slow train coming? A composite research study"	2013	On one side, some of the features of cloud will enable hastening and fastening of its adoption, while on the other there are several challenges that need to be addressed.[8]
"Cloud computing or software as a service—which makes the most sense for HR?"	2010	This paper proposed a sound cloud computing infrastructure to implement in Human resource Management functions in Small and medium enterprises.[29]

Management (HRM) and cloud computing, providing valuable insights into current trends, challenges, and opportunities in this rapidly evolving field are presented in Table 1.

Materials and Methods

The proposed architecture for the study includes the Systematic review of literature, based on the research questions formulated for exploring the existing body of knowledge and determining the future research agenda. The citation analysis, keyword co occurrence and bibliographic coupling in HR and cloud computing is performed. The selection criteria for the paper selection were based on the PRISMA framework. The findings are reported and discussed aiming to provide a fresh insight into the area of study and are supported by visualizations from VOS viewer and NVIVO.

The methodology utilized for mapping and reviewing studies is known as Systematic Literature Review (SLR). This approach involves a series of accepted procedures that allow other researchers to verify and replicate the results.[30,31] To conduct the review, the guidelines and five steps recommended were followed[31], which include the steps presented hereunder.

- **Defining the Research Question:** This is the first step towards systematic literature review. In this step, the research questions are defined. In this study the research questions formulated were:

R1: What is the existing knowledge in the area of HR and cloud computing

R2: What can be the future research agenda in the field of HR and cloud computing

R3: What is the status in terms of citation analysis, co-occurrence of keyword analysis, bibliographic coupling

R4: What are the existing themes in the area

Identifying Relevant Studies: In the second stage of the study, the focus is on identifying the most significant research studies related to the research question (RQ). Two main factors that were considered include search engines and search strings. To locate the relevant research articles on cloud computing and HRM, the researchers used the Web of Science (WoS) database, which is a widely recognized scientific database and commonly used search engine for Systematic Literature Reviews (SLRs). To identify the appropriate search keywords related to these topics, the search chains used in previous studies (e.g., Hohenstein *et al*., 2014) were analysed. The intersection area was narrowing down by tracing those search keywords that were frequently used.

Selection and Evaluation of Studies: A search was carried out on the "web of science" using keywords such as "cloud computing and human resource

management". The research was limited to peer reviewed articles and review papers published between 2013 and 2023. In all, 98 papers were fetched. There were 93 studies identified after careful selection and evaluation on studies and applying inclusion and exclusion criteria. The detailed process involved in the selection and evaluation of studies is discussed in the section on selection strategy; selection criteria; quality assessment and extraction. This segment is subdivided into four subsections: Selection strategy, selection criteria, Quality assessment, and data extraction, which delineate the steps involved in bibliometric analysis. Subsequently, a Systematic literature review was conducted, wherein existing literature was surveyed to delineate future research possibilities in this domain.

Selection Strategy

The bibliometric analysis was performed on the research papers published in databases such as Web of science. A total of 98 articles were extracted using the keywords such as cloud computing and HRM

Selection Criteria

PRISMA is widely recognized as a valuable reporting mechanism in this context. Following the PRISMA framework meticulously, the literature was categorized based on various criteria such as the focal point of the study; method used; conclusions of the studies. PRISMA approach comprised four key steps: Identification, screening, eligibility, and inclusion of research papers. Initially, research papers were identified using the Web of Science database, then they underwent screening and eligibility checks before being included in the literature review. Relevant information such as authorship, title, year, source, affiliation, abstract, publication, citation, and index keywords was extracted and stored in MS Excel for further analysis. Visualization presentations, including the construction and visualization of bibliometric networks, were conducted using VOS viewer software and NVIVO software.

Quality Assessment

A total of 98 articles were identified using the PRIMA approach. However, after conducting a quality assessment, 93 papers (research papers; articles and reviews) were deemed suitable for inclusion in the study. Five papers were excluded, consisting of three editorial materials and two meeting abstracts. To ensure the review's quality, duplications were meticulously checked. Given the relatively small number of research papers, each one could be thoroughly examined. The exclusion criterion stipulated that only papers in the English language be considered, and no duplications were found.

Extraction

The data extraction was primarily centered around:

a. Articles must be research papers and reviews
b. The language should be English only

- **Analysing and Synthesising the Data:** To mine the relevant details in each study and enable multiple researchers to be involved in the process, pre-defined structured coding of the information was carried out in this phase[31] to ensure any kind of biasness; and ensure the reliability and validity of the results. A database was created in a spreadsheet for the article coding process, which included the key themes of each study, main ideas, classifications based on type of research and additional information for each paper.
- **Reporting the Findings and Discussing the Results**

Results and Discussion

Human Resource department's jobs are witnessing a significant shift with the ever increasing pace of change in technology and the complex environment. The Human Resource executive in the organisations have a vital role to play for enhancing the efficiency of their operations and advocating the adoption of cloud based HR solutions. Increasingly the businesses are leveraging the functionalities of Cloud based HR solutions to achieve cost based efficiencies by improving HR solutions. Introducing cloud computing in HRM not only enhances employee efficiency without overburdening them but also boosts organizational productivity. The analysis revealed that the topic has attained significant attention in the recent past, with the exponential rise in the studies focusing on exploring the challenges and benefits of cloud based HR solutions. The important themes that emerged from the studies in this context are presented hereunder

- Cost saving: Studies highlight that cloud based HR solutions can potentially save a lot of cost and can be highly instrumental in reducing the on premise IT and infrastructural support.
- Improvement in scalability and efficiency level: Cloud based solutions in HRM can help improve the efficiency level and scalability of operations by providing on demand access to data and resources.

- Data security and privacy concerns: One of the key challenges that have surfaced in most of the research pertaining to the area related to the security and privacy involved in cloud based HR solutions.
- Integration and customization: Many studies noted the importance of ensuring that cloud-based HR solutions can be integrated with existing systems and customized to meet the unique needs of an organization.

Bibliometric Analysis

Bibliometric analysis relies on gathering "bibliographic data" from diverse online sources, forming the foundation for scientific inquiry and research. This method enjoys widespread acclaim and has been extensively employed in numerous research endeavors. Various tools, including open-source software like bibliometrics, can enhance such analyses. In this instance, VOS Viewer is utilized to advance bibliometric analysis. This section provides an overview of the status of published articles on HRM and cloud computing year wise; top journals publishing in the area of HR and cloud computing by number of documents; document by country/ territory; co-occurrence map of author keywords/terms, citation analysis and co-citation analysis.

Year wise Publications in the Area from 2013–2023

There were a total of 93 publications culled from Web of science. The augmentation in the area of research was evident in the year 2022–2023. The analysis of the research articles in this area was done for a period of 10 years from 2013–2023.

The descriptive statistics of the research paper bearing the distribution of publications year by year are presented in Table 2. The highest articles were published in the years 2022, followed by 15, 12 and 11 articles respectively in 2020, 2021 and 2017 respectively. Table 2 illustrates the overall year-by-year distributions of publications.

Table 2 — Year-by-year distributions of publications

Year of publication	Count of Year of publication
2013	1
2014	1
2015	8
2016	2
2017	11
2018	6
2019	8
2020	15
2021	12
2022	26
2023	3
Grand Total	93

Status of Articles Published Journal wise

There are 12 journals publishing more than 1 research paper; 4 journals publishing more than 2 papers, 2 journals with more than 3 publications and 1 with more than 4 publications (Table 3). It also shows that the highest number of publications in this area are published in IEEE access (6 publications) followed by Kybernetes. The status of articles published journal wise is presented (Table 4). IEEE Access published 6 papers followed by Kybernetes (4 papers); IEEE Transaction on cloud computing; wireless communication and mobile computing (3 papers respectively).

Citation Analysis

The VOS Viewer was used to generate a visualization of the citation networks for the papers being analyzed. This shows how the papers are connected through citations, with each paper represented as a node and the citations as links between the nodes. The visualization was customized to highlight different aspects of the

Table 3 — No. of publication in the journals

No. of publications in journals	No. of papers
Journals with 1 publication	61
More than 1	12
More than 2	4
More than 3	2
More than 4	1

Table 4 — Name of journals and number of paper published

Journals	No. of publications
IEEE Access	6
Kybernetes	4
IEEE Transactions on Cloud Computing	3
Wireless Communications & Mobile Computing	3
Cluster Computing-the Journal of Networks Software Tools and Applications	2
Computational Intelligence and Neuroscience	2
Human-Centric Computing and Information Sciences	2
Sensors	2
Software-Practice & Experience	2
Transactions on Emerging Telecommunications Technologies	2
IEEE Internet of Things Journal	2
IEEE Transactions on Industrial Informatics	2

network, such as the most highly connected papers or the clusters of papers that are most closely related. For this paper, out of 404 authors, 37 met the threshold criteria. Minimum documents of authors were set as 2. The strength of citation link with the other authors was then calculated. The authors with the greatest link were selected. The results of citation analysis: Authors; documents; citations and total link strength are presented in Table 5. It shows the authors with the citations. Top authors in the area are Tan, Haoran; Wu, Min; Huang, Zhiwu; Wang, Yaonan; Faragardi, Hamid Reza. The citation map depicts the connections between the various authors (Fig. 1). It is through this visualisation that one can gain an insight into the network of the relationships, elucidating the patterns and flow of knowledge within the domain of their research. The citation map aids as an important tool to gauge into the dynamic intellectual landscape of the area and helps in identifying the most prominent and key contributors to the body of knowledge.

Co Occurrence Analysis

Co-occurrence Keyword analysis is a method used for identifying the pattern of association between keywords in a set of documents. By analysing the frequency with which keywords appear together, it is possible to identify the most important themes and topics within a particular field or domain.[32]

Author keyword co-occurrence analysis is a specific application of this technique that focuses on the keywords used by authors to describe their research.[33] By analysing the keywords used by different authors, it is possible to identify the most common themes and topics within their work, as well as the connections between different authors and their research.[34] In this case, the minimum occurrence of keyword threshold was set as 2 and out of 352 such keywords, 45 met the criteria.

Table 5 — Results of citation analysis : Authors; documents; citations and total link strength

Author	Documents	Citations	Total link strength
Tan, Haoran	5	40	24
Wu, Min	4	40	20
Huang, Zhiwu	3	38	19
Wang, Yaonan	3	27	11
Faragardi, Hamid Reza	5	92	10
Fahringer, Thomas	3	79	10
Navimipour, Nima Jafari	3	202	9
Dehnavi, Saeid	2	27	8
Kargahi, Mehdi	2	27	8
Miao, Zhiqiang	2	25	8
Yang, Yang	2	17	8
Rahmani, Amir Masoud	4	189	7
Hosseinzadeh, Mehdi	3	182	7
Navin, Ahmad Habibizad	3	182	7
Nikkhah, Hamid Reza	2	7	2
Sabherwal, Rajiv	2	7	2
Zheng, Huiru	2	68	0
Gui, Herong	2	28	0
Qiu, Huili	2	28	0
Song, Qixiang	2	28	0
Chen, Haoran	2	26	0
Lin, Yi	2	26	0
Wang, Wei	2	26	0
Zhang, Jie	2	26	0
Zhao, Yongli	2	26	0
Zheng, Haomian	2	26	0
Bao, Weidong	3	10	0
Huang, Hai	3	10	0
Ji, Haoran	3	10	0
Zhu, Xiaomin	3	10	0
Zong, Haoran	3	10	0
Arabnia, Hamid R	3	9	0
Xiao, Wenhua	2	3	0
Chen, Jianhua	2	0	0
Du, Haorui	2	0	0
He, Debiao	2	0	0
Peng, Cong	2	0	0

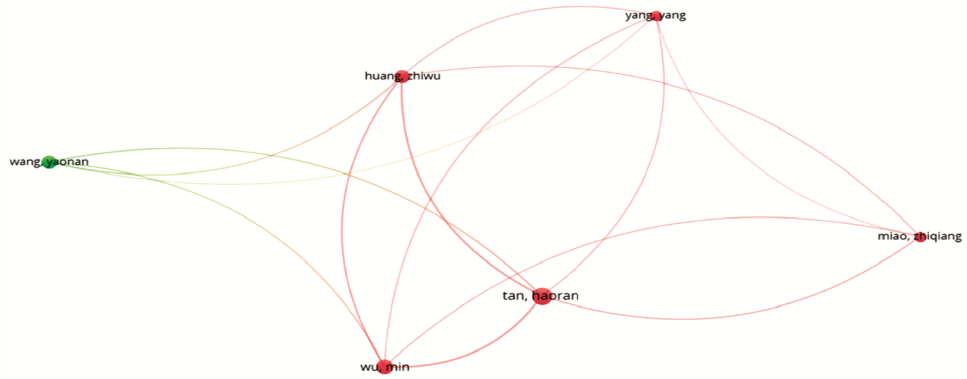

Fig. 1 — Citation map showing the link between authors

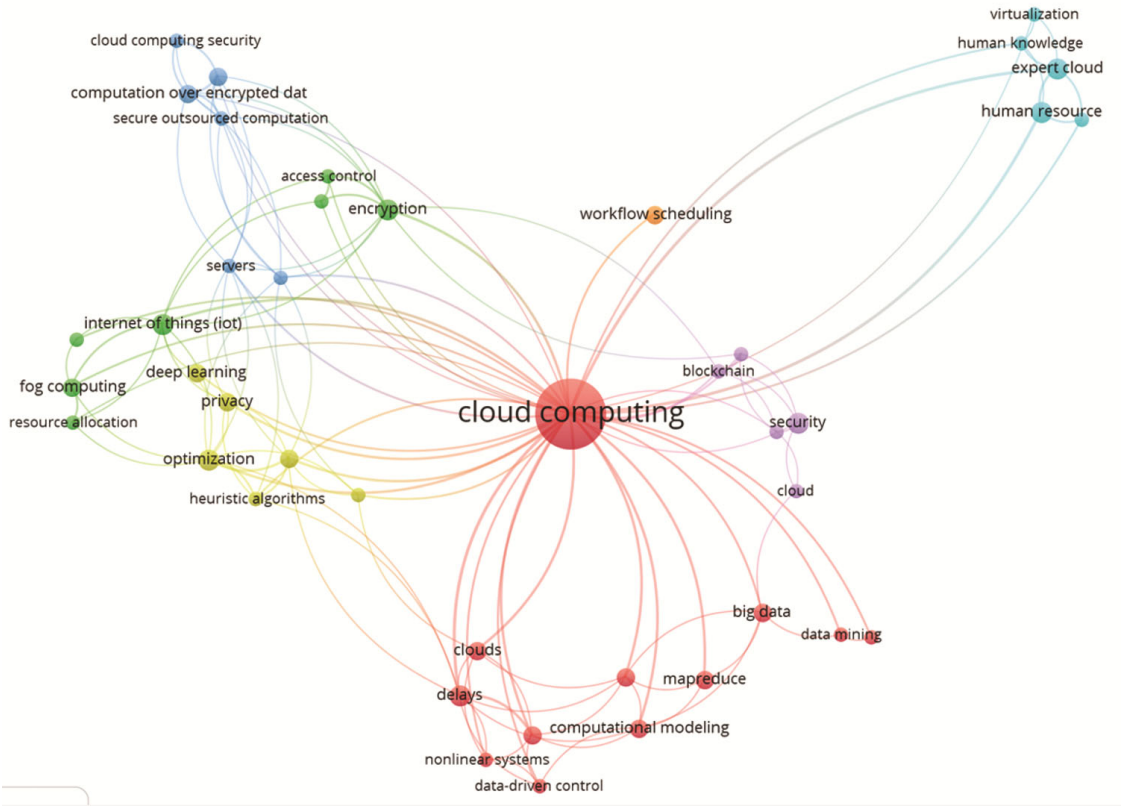

Fig. 2 — Co occurrence map with co occurrence by keyword and link strength

The top 5 frequently used keywords by the link strength are cloud computing; optimisation; delays; encryption and edge computing. The list of keywords with occurrences and link strength is presented in Fig. 2. It is the result of exploration of the key themes and concepts used to study the domain of cloud computing in HR. It suggests that among the myriad of terms used in the study, there are five such cornerstones that resonate the exceptional frequency in our exploration. This figure offers a visual narrative, presenting the list of keywords, along with their link strength and occurrences.

Critical Analysis using Word Cloud Analysis

Word cloud gives a better visualisation of results and is created on the basis of percentage of words in a data set. In the present analysis, the word cloud is generated using NVIVO software. The word cloud is for the abstracts of the studies considered for the research (Fig. 3). Based on the abstracts of the paper under study, word cloud map was generated to gauge the dynamics of the themes and topics under study. Cloud is at the centre of the cloud with data computing, algorithm, optimisation and network, learning surrounding it.

Fig. 3 — Word cloud map based on the abstracts of the studies

Bibliographic Coupling

Bibliographic coupling is a technique used in bibliometrics to identify the degree of similarity between two documents based on their shared references.[35] It is described as a method to measure the intensity of similarity between research papers and other documents based on their shared references.[36] It

Fig. 4 — Bibliographic coupling map

was used to identify most similar documents in a set of more than two million biomedical publications.[37] The bibliographic map is presented in Fig. 4. Tan happens to be the most cited author.

Managerial Trends

Cloud computing has had a significant impact on HR technology. On a worldwide scale, the HR cloud is boosting organizational efficiency and productivity. This paper is about systematic literature review and bibliometric analysis. There are multiple benefits that can be achieved by cloud based HRM. From ensuring fast decision making to ease of access to innovation to using it as a platform for enabling learning and development in the organisations, cloud is being used by managers across the organisations in multiple ways.

- Enabling Swift and Informed Decision-Making: Through cloud computing in HR, decision-making processes can be refined and driven by data. The implementation of dashboards provides real-time insights across various parameters, fostering intelligent decision-making.
- Enhanced Accessibility to Innovation via Software as a Service (SaaS): Among the various models utilized in cloud-based HRM, Software as a Service stands out as highly cost-effective and efficient.
- Streamlined Recruitment Processes: With the influx of multiple applications for each job opening, AI-driven screening tools streamline the process, reducing the manual workload.
- Improved Payroll Management: Cloud-based systems offer enhanced effectiveness in managing employee compensation.
- Efficient Employee Feedback Management and Suggestion Systems: Effective feedback management fosters industrial democracy, reducing time and energy expenditure while minimizing bias and enhancing accuracy through cloud-based systems.
- Reduction of Paperwork: Agile systems and processes are facilitated by cloud-based solutions, leading to a reduction in paperwork and increased efficiency.
- Automation of Repetitive Tasks with AI-driven Systems: Automating tasks such as scheduling, calendar management, and reminders reduces duplications and redundancies, enhancing overall efficiency.
- Support for Learning and Development: Cloud-based solutions not only facilitate learning and development but also enable the tracking of employee growth trajectories, learning pace, and assessments, reducing the man-hours required for training and facilitating self-paced learning.

Conclusions

This study provides an overview of the existing knowledge in the area of cloud based systems and HR. The findings can serve as a guide for organisations to work on faster decision making capabilities, improving efficiency and scalability of cloud based HRM. This research may serve as an impetus to empirically test the linkage of cloud based HR systems with efficiency and productivity of the organization. Additionally, it is important to ensure that cloud-based HR solutions are customized to the requirements of the organisations and are well integrated with the system. This study can be highly instrumental in providing guidance and insights to the managers and policy formulators to develop a robust mechanism for ensuring data security and privacy in the systems while ensuring compliances and regulations. The research has wide scope and has several implications- both pragmatic and policy related. Future research in this area should focus on developing best practices and guidelines for implementing cloud-based HR solutions that balance the benefits of cloud computing with the need for data security and privacy.

References

1 Wang C, Lu Y & Bai Y, A study on the influencing factors of cloud-based human resource management system adoption, *J Indt Eng Manag*, **9(3)** (2016) 813–826, https://doi.org/10.3390/rs15082024.

2 Teo T S H, Lim G S & Fedric S A, The adoption and diffusion of human resources information systems in Singapore, *Asia Pac J Hum Resour*, **45 (1)** (2007) 44–62, https://doi.org/10.1177/1038411107075402.

3 Bondarouk T, Ruël H & van der Heijden B, e-HRM effectiveness in a public sector organization: a multi-stakeholder perspective, *Int J Hum Resour Manag*, **20(3)** (2009) 578–590, https://doi.org/10.1080/09585190802707359.

4 Parry E, An examination of e-HRM as a means to increase the value of the HR function, *Int J Hum Resour Manag*, **22(05)** (2011) 1146–1162, https://doi.org/10.1080/09585192.2011.556791.

5 Strohmeier S, Research in e-HRM: Review and implications, *Hum Resour Manag Rev*, **17(1)** (2007) 19–37, https://doi.org/10.1016/j.hrmr.2006.11.002.

6 Attaran M & Woods J, Cloud computing technology: improving small business performance using the Internet, *J Small Bus Entrep*, **31(6)** (2018) 495–519, https://doi.org/10.1080/08276331.2018.1466850.

7 Basu R, Bhola P, Ghosh I & Dan P K, Critical linkages between quality management practices and performance from Indian IT enabled service SMEs, *Total Qual Manag Bus Excell*, **29(7–8)** (2018), 881–919, https://doi.org/10.1080/14783363.2016.1252259.

8 Willcocks L P, Venters W & Whitley E A, Cloud sourcing and innovation: slow train coming? A composite research study, *Strateg Outsourc Int J*, **6(2)** (2013) 184–202, https://doi.org/10.1108/SO-04-2013-0004.

9 Sammeta N & Parthiban L, Medical data analytics for secure multi-party-primarily based cloud computing utilizing homomorphic encryption, *J Sci Ind Res*, **80(08)** (2021) 692–698, doi: 10.56042/jsir.v80i08.39401.

10 Bohnert D & Ross W H, The influence of social networking web sites on the evaluation of job candidates, *Cyberpsychol Behav Soc Netw*, **13(3)** (2010) 341–347, https://doi.org/10.1089/cyber.2009.0193.

11 Kluemper D H, Davison H K, Cao X & Wu B, Social networking websites and personnel selection: A call for academic research, *Emp Recruit Selec Assess*, (2015) 61–79.

12 Sprague G D & Reid T S, A break in the clouds: A proposed framework for analyzing cloud computing transactions, *Taxes*, **92** (2014) 31.

13 Athale R, Barde M, Kamble H, Mirajkar N & Singh K, Implementation of private cloud using eucalyptus and an open-source operating system, *Int J Comput Sci*, (2012) 360–364, https://doi.org/10.48550/arXiv.1207.3037.

14 Ross P, How to keep your head above the clouds: Changing ICT worker skill sets in a cloud computing environment, *Employ Relat Rec*, **11(1)** (2011), 62–74.

15 Starner T, How wearables worked their way into the mainstream, *IEEE Pervasive Computing*, **13(4)** (2014) 10–15.

16 Rittinghouse J W & Ransome J F, *Cloud Computing: Implementation, Management, and Security* (CRC Press) 2016, https://doi.org/10.1201/9781439806814.

17 Bayramusta M & Nasir V A, A fad or future of IT?: A comprehensive literature review on cloud computing research, *Int J Inf Manag*, **36(4)** (2016) 635–644, https://doi.org/10.1016/j.ijinfomgt.2016.04.006.

18 Bhatnagar J & Budhwar P, Macro talent management in India: A contextual analysis of the challenges, opportunities and emerging patterns, *Macro Talent Management in Emerging and Emergent Markets*, (2018) 85–103.

19 DiRomualdo A, El-Khoury D & Girimonte F, HR in the digital age: how digital technology will change HR's organization structure, processes and roles, *Strategic HR Rev*, **17(5)** (2018) 234–242, https://doi.org/10.1108/SHR-08-2018-0074.

20 Alshamaila Y, Papagiannidis S & Li F, Cloud computing adoption by SMEs in the north east of England: A multi-perspective framework, *J Enterprise Inf Manag*, **26(3)** (2013) 250–275, https://doi.org/10.1108/17410391311325225.

21 Dwivedi A D, Srivastava G, Dhar S & Singh R, A decentralized privacy-preserving healthcare blockchain for IoT, *Sensors*, **19(2)** (2019) 326, https://doi.org/10.3390/s19020326.

22 Venkatesh V, Morris M G, Davis G B & Davis F D, User acceptance of information technology: Toward a unified view, *MIS Quarterly*, (2003) 425–478, https://doi.org/10.2307/30036540.

23 Al-Dmour R H, Love S & Al-Debei M M, Factors influencing the organisational adoption of human resource information systems: A conceptual model, *Int J Bus Innov Res*, **11(2)** (2016) 161–207, https://doi.org/10.1504/IJBIR.2016.077986.

24 Pouliakis A, Margari N, Karakitsou E, Archondakis S & Karakitsos P, Emerging technologies serving cytopathology: Big data, the cloud, and mobile computing, in *Emerging Developments and Practices in Oncology* (IGI Global) 2018, 114–152), doi: 10.4018/978-1-5225-3085-5.ch005.

25 Yokkhun N & Papasratorn B, The use of cloud-based HRMIS solutions and their impact on HR function effectiveness and efficiency: A case study of a Thai manufacturing SME, *J Hum Resource Manag*, **21(2)** (2018) 134–155, https://doi.org/10.1142/S0219877018500232.

26 Zhao M & Rabiei K, Feasibility of implementing the human resource payroll management system based on cloud computing, *Kybernetes*, **52(4)** (2022) 1245–1268, https://doi.org/10.1108/K-07-2021-0554.

27 Bello S A, Oyedele L O, Akinade O O, Bilal M, Delgado J M D, Akanbi L A & Owolabi H A, Cloud computing in the construction industry: Use cases, benefits and challenges, *Autom Constr*, **122** (2021) 103441, https://doi.org/10.1016/j.autcon.2020.103441.

28 Agarwal V, Mathiyazhagan K, Malhotra S & Saikouk T, Analysis of challenges in sustainable human resource management due to disruptions by Industry 4.0: an emerging economy perspective, *Int J Manpow*, **43(2)** (2021) 513–541, https://doi.org/10.1108/IJM-03-2021-0192.

29 Farah S, Cloud computing or software as a service — which makes the most sense for HR?. *Employ Relat Today*, **36(4)** (2010) 31–37, https://doi.org/10.1002/ert.2027.

30 Tranfield D, Denyer D & Smart P, Towards a methodology for developing evidence-informed management knowledge by means of systematic review, *Br J Manag*, **14(3)** (2003) 207–222, https://doi.org/10.1111/1467-8551.00375.

31 Denyer D & Tranfield D, Producing a systematic review, in *The Sage Handbook of Organizational Research Methods* (Sage Publications Ltd) 2009, 671–689.

32 Van Eck N J & Waltman L, Text mining and visualization using VOSviewer, *arXiv preprint arXiv:1109.2058,* (2011) https://doi.org/10.48550/arXiv.1109.2058.

33 Chen C, CiteSpace II: Detecting and visualizing emerging trends and transient patterns in scientific literature, *J Am Soc Inf Sci Technol*, **57(3)** (2006) 359–377, https://doi.org/10.1002/asi.20317.

34 Van Eck N & Waltman L, Software survey: VOS viewer, a computer program for bibliometric mapping, *Scientometrics*,

84(2) (2010) 523–538, https://doi.org/10.1007/s11192-009-0146-3.

35 Wang X L, Wang L, Bi Z, Li YY & Xu Y, Cloud computing in human resource management (HRM) systems for small and medium enterprises (SMEs), *Int J Adv Manuf Technol*, **84** (2016) 485–496, https://doi.org/10.1007/s00170-016-8493-8.

36 Kessler M M, Bibliographic coupling between scientific papers, *American Documentation*, **14(1)** (1963) 10–25, https://doi.org/10.1002/asi.5090140103.

37 White H D, Path finder networks and author cocitation analysis: A remembrance of things past, a look to the future, *Scientometrics*, **58(3)** (2003) 571–607, https://doi.org/10.1002/asi.10228.