Bibliometrics-based Evaluation of the Human Resource Information System Research Trend: 1991–2021

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Abstract
In recent years, the human resource information system (HRIS) has received a lot of attention, including in-depth scholarly articles. This study aimed to conduct bibliometric analysis for examining the topography and obtaining a structural overview regarding the characteristics of HRIS research. Using specific search criteria related to the HRIS research domain, the research documents were extracted from the Scopus database. A total of 808 documents from 1991 to 2021 were identified and analysed for selecting the growth trajectory of HRIS literature, recognizing influential researchers, journals, articles, countries, keywords, and subject areas, exploring the intellectual structure of this knowledge base and highlighting topical trends. Key findings of this study indicated a steady growth in the volume of HRIS publications in spite of certain fluctuations. The current study is intended to provide relevant scholars with a panorama of global HRIS research along with the established guidelines for future study to the area and most pertinent research fields.

Keywords: Bibliometric Analysis, Human Resource Information System, HRIS, Review, Research Trends.

1.0 Introduction

Over the past few decades, organizations are encountering numerous changes because of rapid technological advancement, globalizations, intense competition, and the emergence of knowledge-oriented economy. As a result, the functions of human resource (HR) are changing swiftly for keeping pace with such changes in the organizational arena (Quaosar, Hoque, & Bao, 2018). In this way, the traditional HR policies previously widely practised have become outdated with the passage of time and insufficient for implementation (Welch & Björkman, 2015). Today's organizations are paying increased attention on taking the advantage of information technology and human resource management (HRM) since these two constructs are correlated (Fobang, Wamba, & Kamdjoug, 2019). Therefore, human resource information system (HRIS) aims to enhance administrative efficiency through faster information processing, improved employee communications, lower costs of manpower, greater accuracy in information, and overall improvements of HR functionality (Quaosar et al., 2018; Wiblen, Grant, & Dery, 2010).

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HRIS formed the central focus of a number of authors in the extant HRM literature. Based on the view of Thite, Kavanagh, and Johnson (2012), HRIS can be conceptualized as a system used for manipulating, storing, acquiring, recovering, and delivering pertinent information regarding the organizational human resources. In line with this, HRIS is defined as a combined hardware, software, system procedures and policies, support functions into a process of automated system which support various operational and strategic processes of HR managers and line managers (Chauhan, Sharma, & Tyagi, 2011). In recent times, the focal point of HRIS in an organization has shifted to key strategic applications namely recruitment and selection, self-service technologies, compensation and performance management, alignment of HR planning with organization's planning (Bell, Lee, & Yeung, 2006; Chakraborty & Mansor, 2013; Panayotopoulou, Vakola, & Galanaki, 2007).

By way of example, Pereira, Verocai, Cordeiro, Gomes, and Costa (2015) conducted a bibliometric research addressing the Information Systems and Innovation issues. Their research analysed 127 articles predominantly from the United States and Brazil. Using the Scopus database from the period of 1971 to 2017, Ezenwoke, Ezenwoke, Eluyela, and Olusanmi (2019) used a bibliometric technique to statistically examine the impact and volume of the accounting information systems literature. In addition to that, Lin, Hsu, and Chiang (2016) investigated the contributions of information systems in the literature of electronic commerce by performing a bibliometric study where they reviewed 853 articles in ten dominant journals published from 1991 to 2014 period. Based on previously published research, it is apparent that the global research trends in scientific publications regarding information systems issues in the field of HRM is largely lacking in the scholarly literature.

Despite various studies were carried out on information systems focusing certain perspectives, the bibliometric analysis examining the information systems from the perspective of HRM is still rare in the body of literature. Thus, the current study aims to provide a macroscopic overview of the global publications, trends, and characteristics of HRIS research by performing bibliometric analysis. In this connection, our study makes key contribution to the scholars interested to expand the field of HRIS because we attempted to outline the trends of HRIS research and identified the most relevant areas of research which will be considered for carrying out future research on HRIS. Furthermore, this paper presented an informative and clear picture demonstrating the research achievements pertaining to HRIS domain, which would assist practitioners and researchers to highlight the underlying results from journals, authors, countries, references, institutions, and research topics.

2.0 Methodology

The methodology is based on the application of bibliographic technique that is also referred as the statistical or quantitative analysis of publications. This technique highlights mapping of the trends, characteristics, development of scientific results, and publication history within a particular research field (Guo et al., 2019; Nunen, Li, Reniers, & Ponnet, 2018; Ugolini et al., 2015). Similarly, bibliometric approach not only is appropriate for quantifying and identifying the patterns of cooperation between the authors' performance and research nature, publications, countries, journals, and institutes, but also is applied for assessing their contribution on

particular topics (Li & Zhao, 2015; Nunen et al., 2018). Bibliometric technique could be used at the position of titles, summaries of publications, keyword lists, or the full record of citation to obtain the particular topics along with subject categories assigned for publications (Eck & Waltman, 2009; Guo et al., 2019).

In this study, we retrieved data regarding HRIS from the Scopus, which is a bibliographic database covering about 22,000 titles in medical, technical, social sciences, and scientific field. The Scopus database was selected since it is the largest database when compared to Web of Science or Pubmed (Falagas, Pitsouni, Malietzis, & Pappas, 2008; Sweileh et al., 2017). Moreover, Scopus database is used by performing certain analytical functions. The "source type" was one such function that allowed our refining of retrieved scientific publications based on the data source type. In the 'document type' of this study, our analysis was limited to articles, conference papers, conference review, book, book chapter since these are considered as 'certificated knowledge' and also subject to peer review (García-Lillo, Úbeda-García, & Marco-Lajara, 2017). Subsequently, our analysis based on 'source type' was confined to conference proceedings, journals, book series, books and excluded trade publications as they are not considered as true publications (Sweileh et al., 2017).

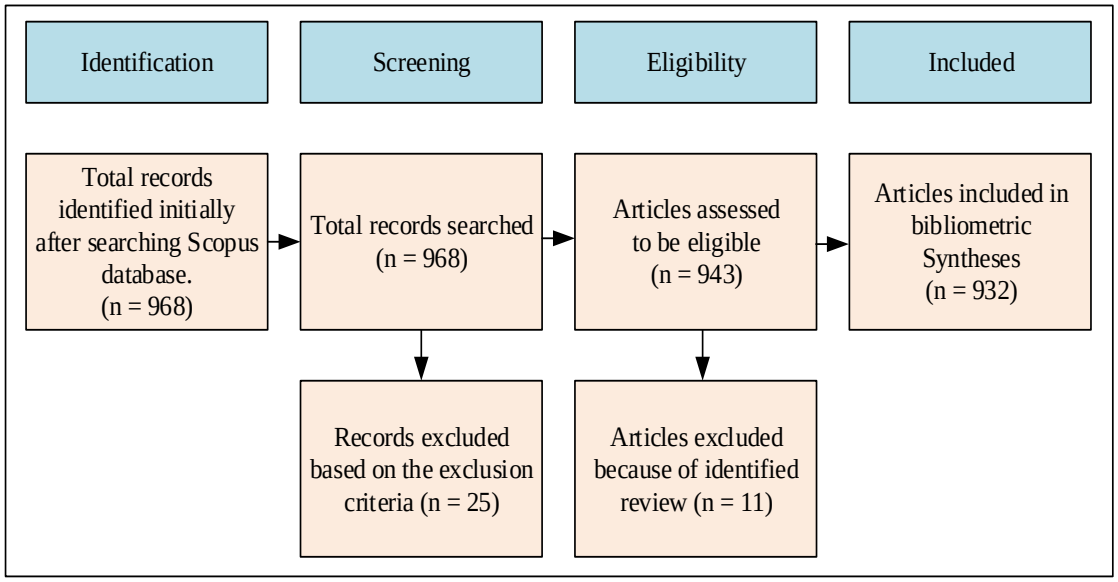

Figure 1. The flow diagram of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) detailing steps in the screening and identification of sources

Source: Authors' own study, 2023

In this bibliometric review, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines was followed in searching and identifying relevant documents from Scopus database (see Figure 1). This study applied the central theme of research articles including "Human resource* information system*" in the title, abstract, and keywords. Initially the query search string was: (TITLE-ABS-KEY ("Human resource* information system*")) generating 297 documents. Taking past researchers' view into consideration, we added various similar terms of HRIS and found our search string as: TITLE-ABS-KEY ("Human resource* information system*" OR "HR technolog*" OR "human resource* technolog*" OR "HR

information system*" OR hris OR e-hr) producing 844 documents. After imposing the exclusion criteria, we set the search string: TITLE-ABS-KEY ("Human resource* information system*" OR "HR technolog*" OR "human resource* technolog*" OR "HR information system*" OR HRIS OR e-hr) AND (EXCLUDE (PUBYEAR,2020)) AND (EXCLUDE (DOCTYPE,"ed") OR EXCLUDE (DOCTYPE,"no") OR EXCLUDE (DOCTYPE,"le") OR EXCLUDE (DOCTYPE,"rp") OR EXCLUDE (DOCTYPE,"sh") OR EXCLUDE (DOCTYPE,"tb") OR EXCLUDE (DOCTYPE,"Undefined")) AND (EXCLUDE (SRCTYPE,"d")) resulting in 968 documents. Apart from that, we also examined each documents for finding potential review paper and found 11 documents which was excluded from our bibliometric syntheses. Finally, we obtained total 932 documents from Scopus database for analysis.

3.0 Results and Discussion

The analyses were made based on the publications obtained from the Scopus database from the period of 1991 to 2021 according to the year of publications, most frequently cited publications, type of publication, number of authors, and text analysis of publications' titles.

3.1 Year of publications and research trends

The year of HRIS publications is analysed with frequency by providing an overview of research. The findings in Table 1 included that HRIS research started its journey in 1991 with the gradual emergence of internet and information technology in HR operations. In this year, the number of scientific researches following HRIS was 7. The least number of published documents was 3 in the year 1994 while majority of the publications (75 documents) were made possible in 2021 representing 8.05% of the total publications.

Table 1. Year of HRIS publications

Year	Number of Documents	Cumulative	Percent
1991	7	7	0.75
1992	9	16	0.96
1993	4	20	0.43
1994	3	23	0.32
1995	8	31	0.86
1996	9	40	0.97
1997	14	54	1.50
1998	8	62	0.86
1999	13	75	1.39
2000	16	91	1.72
2001	9	100	0.97
2002	8	108	0.86
2003	15	123	1.61
2004	11	134	1.18

2005	15	149	1.61
2006	18	167	1.93
2007	33	200	3.54
2008	29	229	3.11
2009	48	277	5.15
2010	64	341	6.87
2011	36	377	3.86
2012	28	405	3.00
2013	37	442	3.97
2014	38	480	4.08
2015	57	537	6.12
2016	62	599	6.65
2017	59	658	6.33
2018	63	721	6.76
2019	65	786	6.97
2020	71	857	7.62
2021	75	932	8.05
Total	**932**		**100**

Furthermore, the trend of HRIS research is presented in Figure 2 indicating that there were fluctuations in publications throughout the years. It is noticeable in the Figure that after the year 2002, there were an increasing trend till 2010 with few variations and after the year 2012 the number of publications slowly increased with fluctuations.

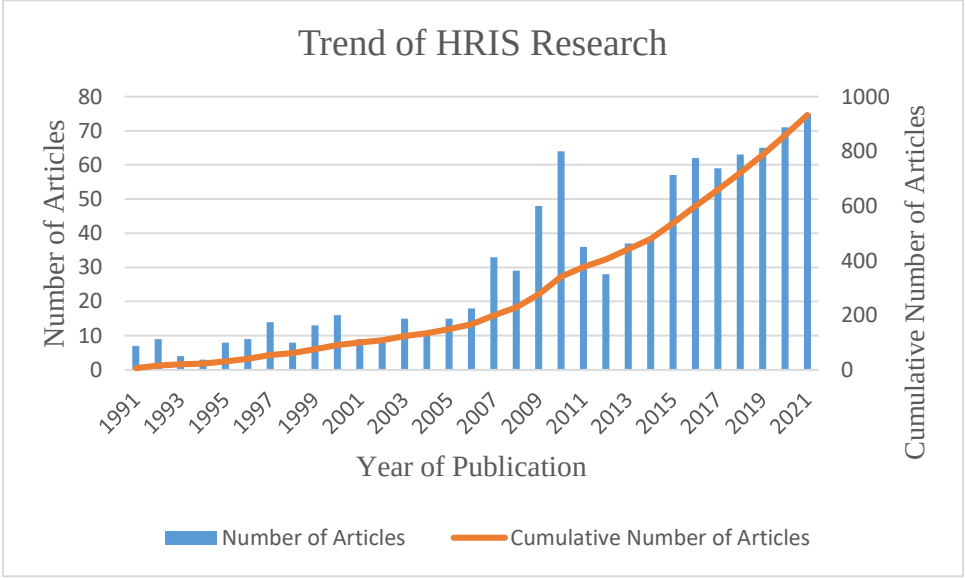

Figure 2. The annual and cumulative number of research articles on HRIS in Scopus database from 1991 until 2021.

Source: Authors' own study, 2023

3.2 Type of publications

In this review, the distribution of document type was analysed by applying Scopus database. It is evident from the analysis that 6 types of documents were published from the year of 1991 to 2021. The article was the most frequently applied type comprising 62.87% (586) of the total publications, followed by conference paper (227; 24.38%), review (60; 6.44%), book chapter (44; 4.7%), and conference review (13; 1.36%). Lastly, book was the least frequently used publication in the HRIS research indicating less significance compared to article, conference paper, review, book chapter, and conference review (see Table 2).

Table 2. Type of documents

Type of Publications	Frequency	Percent
Article	586	62.87
Conference Paper	227	24.38
Review	60	6.44
Book Chapter	44	4.70
Conference Review	13	1.36
Book	2	0.25
Total	**932**	**100**

Cross-tabulation was also performed focusing on the publication year and the type of publication of HRIS research. The distribution of number of publication is shown in Table 3. The journal article is the most frequent publication type and the Table indicates that majority of the articles were published in 2006 representing 25 of the total published documents on HRIS. The second leading publication type was conference paper that reported highest number in 2020 followed by review in 2000, book chapter in 2017, conference review in 2007, and book in 2016. In addition, 2021 was the most productive year for publishing maximum number of research paper such as total 44 documents based on HRIS.

Table 3. Year and type of document of HRIS research

Year	Article	Conference Paper	Review	Book Chapter	Conference Review	Book	Total
1991	10	5	4	1	1	1	22
1992	13	8	3	2	1	0	27
1993	11	8	3	1	0	1	24
1994	12	4	2	1	1	1	21
1995	15	7	5	2	2	1	32
1996	12	8	4	2	1	0	27
1997	19	6	2	1	0	0	28
1998	11	8	2	3	2	1	27
1999	20	7	2	1	1	0	31
2000	15	4	**6**	1	0	0	26
2001	14	6	3	2	1	1	27
2002	20	7	2	2	1	0	32
2003	20	5	4	1	0	0	30

2004	21	6	2	1	1	1	32
2005	19	8	3	2	1	0	33
2006	**25**	5	3	1	0	1	35
2007	17	7	4	1	**3**	0	32
2008	16	6	3	2	1	1	29
2009	24	8	2	3	1	0	38
2010	20	8	3	2	0	1	34
2011	17	8	2	2	0	0	29
2012	17	5	3	1	0	1	27
2013	19	4	2	4	2	0	31
2014	16	4	1	1	0	0	22
2015	17	6	2	2	0	0	27
2016	16	8	2	3	1	**2**	32
2017	16	3	2	**5**	0	0	26
2018	23	5	2	1	0	0	31
2019	22	6	3	2	2	1	36
2020	24	**9**	2	2	2	1	40
2021	24	8	5	4	2	1	**44**
Total	**545**	**197**	**88**	**59**	**27**	**16**	**932**

3.3 Language of Publication

In the domain of HRIS research, ten different languages were identified since the year of 1991. As shown in Table 4, English was the dominant language for HRIS publications worldwide incorporating 889 published documents followed by Chinese (10; 1.11%), French (7; 0.72%), German (6; 0.65%), and Spanish (5; 0.51%). Other languages like Japanese, Portuguese, Russian, Persian, and Ukrainian were used in less than 5 publications relating to HRIS research.

Table 4. Language of publications

Language	Frequency	Percent
English	889	95.41
Chinese	10	1.11
French	7	0.72
German	6	0.65
Spanish	5	0.51
Japanese	4	0.4
Portuguese	3	0.37
Russian	3	0.36
Persian	3	0.29
Ukrainian	2	0.18
Total	**932**	**100**

3.4 Preferred journals

In terms of productive journals, Table 5 presented top 10 journals with their total publications, CiteScore 2018, and their publisher. Most notably, CiteScore developed by Elsevier in 2016, assesses the citation impact of documents including book series, journals, trade journals, and conferences which are covered by the Scopus database (Meho, 2019). Also, CiteScore of a journal includes a measure exhibiting recent published articles to average number of citations per year in that journal. However, the Human Resources for Health journal published 20 articles till the year 2019 reporting the CiteScore of 2.76. Afterwards, the second position was grabbed by International Journal of Human Resource Management through publishing 18 articles and representing 2.23 percent of overall publications on HRIS. Although, the Human Resource Management Review journal published by Elsevier ranked first in respect of CiteScore 2018, this journal is in fifth position in case of publishing 11 articles.

Table 5. The top 10 most productive journals on HRIS research

Rank	Journal	Total Publication	Percent	CiteScore 2018	Publisher
1.	Human Resources for Health	20	2.48	2.76	Springer Nature
2.	International Journal of Human Resource Management	18	2.23	2.71	Taylor & Francis
3.	Personnel Review	15	1.86	1.95	Emerald
4.	International Journal of Business Information Systems	15	1.86	1.14	Inderscience
5.	Human Resource Management Review	11	1.36	4.97	Elsevier
6.	International Journal of Human Resources Development and Management	10	1.24	0.56	Inderscience
7.	Plos One	9	1.11	2.97	Public Library of Science
8.	Human Resource Management International Digest	9	1.11	0.14	Emerald
9.	Human Resource Management	8	0.99	1.15	Wiley Online Library
10.	Advanced Series in Management	7	0.87	0.17	Emerald

3.5 Most influential authors

In this bibliometric review, the details of top ten prolific authors in HRIS research are investigated in Table 6 for the period of 29 years starting from 1991. Initially, Eckhardt, Andreas was the first in terms of publishing 18 papers on HRIS consisting 2.23 percent of overall publications. Laumer, Sven emerged as the second prolific author affiliated with the institute of Friedrich-Alexander-Universität Erlangen-Nürnberg from Germany publishing 16 articles. Despite, both Tansley, Carole and Weitzel, Tim published 12 articles each, their origin were United Kingdom and Germany respectively. Apparently, out of 10 most

prolific authors in HRIS publications, 4 authors originated from Germany while 2 authors came from Netherlands.

Table 6. List of the 10 most productive authors in the field of HRIS research

Rank	Author	Scopus author ID	Total Publications	Percent	Current affiliation	Country
1.	Eckhardt, Andreas	24484722800	18	2.23	German Graduate School of Management and Law gGmbH	Germany
2.	Laumer, Sven	24484821200	16	1.98	Friedrich-Alexander-Universität Erlangen-Nürnberg	Germany
3.	Strohmeier, Stefan	16043513000	15	1.86	Universität des Saarlandes	Germany
4.	Tansley, Carole	6603414846	12	1.49	Nottingham Business School	United Kingdom
5.	Weitzel, Tim	6701616351	12	1.49	Universität Bamberg	Germany
6.	Biering-Sørensen, Tor	25637106800	10	1.24	KøbenhavnsUniversitet	Denmark
7.	Bondarouk, Tanya V.	12762717700	9	1.11	University of Twent	Netherlands
8.	Calvo, Maria L.	7201476159	8	0.99	Universidad Complutense de Madrid	Spain
9.	Cheben, Pavel	6701395560	8	0.99	National Research Council Canada	Canada
10.	Harnisch, Bernd	6602177716	7	0.87	ESTEC - European Space Research and Technology Centre	Netherlands

3.6 Most cited articles

This paper also examined the scientific publications focusing the number of citations identified by the Scopus database. Waltman (2016) were of the view that, citation defines the citing authors' usage of cited works and also highlights the effect of cited works on the new works of the authors, and thus knowledge flows from the cited works to the citing authors. The purpose of frequent using of citation analysis includes evaluating or comparing the journals or articles (Ahmi, Rahim, & Elbardan, 2018). As shown in Table 7, the details of top 10 cited publications on HRIS are provided. The table also evidenced that the article by Strohmeier, S. was the top cited paper published in the journal of Human Resource Management Review with the total citation of 190. Next, the paper by Lengnick-Hall, M.L. and Moritz, S. was reported as second top cited paper published in 2003. Taking citation per year into account, paper by Strohmeier, S. positioned also as the top cited publication. Out of 10 top cited publications, the type of 2 papers was Conference Paper, 2 papers were termed as Review paper, and other 6 papers were reported as research article on HRIS.

Table 7. Top 10 cited documents in HRIS publication

Rank	Title	Year	Author(s)	Journal name	Total Citation	Citation per Year	Type of Document
1.	Research in e-HRM: Review and implications	2007	Strohmeier, S.	Human Resource Management Review	190	80.5	Article
2.	The impact of e-HR on the human resource management function	2003	Lengnick-Hall, M.L; Moritz, S.	Journal of Labour Research	144	17	Conference Paper
3.	The use of technologies in the recruiting, screening, and selection processes for job candidates	2003	Chapman, D.S.; Webster, J.	International Journal of Selection and Assessment	131	12.5	Review
4.	The use of human resource information systems: A survey	2001	Ball, K.S.	Personnel Review	112	10.25	Article
5.	The effects of information management policies on reactions to human resource information systems: An integration of privacy and procedural justice perspectives	1999	Eddy, E.R.; Stone, D.L.; Stone-Romero, E.F.	Personnel Psychology	105	13.33	Article
6.	The use and impact of human resource information systems on human resource management professionals	2007	Hussain, Z.; Wallace, J.; Cornelius, N.E.	Information and Management	101	20	Article
7.	Human resource information systems:	2003	Hendrickson, A.R.	Journal of Labour Research	84	7.2	Conference Paper

	Backbone technology of contemporary human resources						
8.	The influence of technology on the future of human resource management	2015	Stone, D.L.; Deadrick, D.L.; Lukaszewski, K.M.; Johnson, R.	Human Resource Management Review	78	6.3	Article
9.	Liberating HR through technology	2003	Shrivastava, S.; Shaw, J.B.	Human Resource Management	77	4.67	Review
10.	Human resource information systems: A current assessment	1986	DeSanctis, G.	MIS Quarterly: Management Information Systems	76	2.86	Article

3.7 Contribution of regions/countries

In our study, the contributions of countries in HRIS publications are also analysed. The regions/countries are arranged based on their respective number of publication on HRIS. It was apparent from Table 8 that United States was the top publishing country from the period of 1991 to 2019 and the most productive university in the United States, producing 9 papers on HRIS research, was the University of Pittsburgh. Moreover, China was the second productive country publishing 12.5% of overall publications on HRIS and the Chinese Academy of Sciences contributed most in HRIS research. On top of that, United Kingdom (61, 23.5%), Germany (56, 23.5%), and India (61, 23.5%) attained the position of third, fourth, and fifth respectively.

Table 8. Top 20 countries with their productive institutions in HRIS research output

Rank	Country	Frequency	Percent	The most productive institution	Publications of institution
1.	United States	168	20.79	University of Pittsburgh	9
2.	China	76	9.41	Chinese Academy of Sciences	12
3.	United Kingdom	61	7.55	Nottingham Trent University	8
4.	Germany	56	6.93	Universität Bamberg	13
5.	India	44	5.45	Amity University, Noida	3
6.	France	34	4.21	Laboratoire d'Economie et de Sociologie du Travail	4
7.	Spain	33	4.08	Universidad Complutense de Madrid	7
8.	Australia	32	3.96	The University of Sydney	5
9.	Italy	29	3.59	Università degli Studi di Milano	4

10.	Canada	28	3.47	National Research Council Canada	6
11.	Malaysia	26	3.22	Universiti Teknologi Malaysia	6
12.	Netherlands	26	3.22	University of Twente	7
13.	Indonesia	25	3.09	Universitas Indonesia	5
14.	Japan	22	2.72	Nagoya University	2
15.	South Africa	20	2.48	University of Witwatersrand	5
16.	Taiwan	15	1.86	National Taiwan Normal University	3
17.	Iran	13	1.61	University of Birjand	2
18.	South Korea	13	1.61	Kyung Hee University	2
19.	Switzerland	13	1.61	Organisation Mondiale de la Santé	3
20.	Denmark	12	1.49	Københavns Universitet	8

3.8 Top subject areas for publications

This bibliometric review also analysed multiple subject areas pertaining to HRIS publications. First and foremost, majority of the scientific publications based on HRIS came from the area of Business, Management and Accounting comprising 163 documents as presented in Table 9. Since HRIS is the combination of human resource and information systems, it is not surprising to include Computer Science as the second subject area for covering 156 documents on HRIS. The Engineering field incorporated the researches relating to HRIS including 128 publications followed by Social Sciences (117, 12.62%), Decision Sciences (97, 10.40%), Economics, Econometrics and Finance (70, 7.55%), Psychology (60, 6.44%) etc.

Table 9. Top subject areas relevant to HRIS study

Rank	Subject Areas	Frequency	Percent
1.	Business, Management and Accounting	163	17.45
2.	Computer Science	156	16.71
3.	Engineering	128	13.74
4.	Social Sciences	117	12.62
5.	Decision Sciences	97	10.4
6.	Economics, Econometrics and Finance	70	7.55
7.	Psychology	60	6.44
8.	Environmental Science	40	4.33
9.	Materials Science	30	3.22
10.	Arts and Humanities	22	2.34
11.	Multidisciplinary	13	1.36
12.	Others	36	3.84
	Total	**932**	**100**

3.9 Top keywords applied in HRIS publications

There are numerous keywords applied in HRIS Publications from the period of 1991 to 2019. As depicted in Table 10, the keywords are exhibited based on their frequency of usage. Most notably, 'Information Systems' is the most frequently applied keyword in HRIS publications appearing in 114 documents. The second position was grabbed by the keyword 'Human Resource Management' occurring in 12.5% of total publications. While 85 research paper applied the keyword 'Human Resource Information Systems', HRIS was applied as keyword in 71 publications. Other keywords namely Information Management (46), Human Resources (37), Information Technology (29), Management Information Systems (25), Resources Information (19) etc. were used in different publications pertaining to HRIS.

Table 10. Top frequently used keywords in HRIS research

Rank	Keywords	Frequency	Percent
1.	Information Systems	114	13.94
2.	Human Resource Management	110	13.61
3.	Human Resource Information Systems	85	10.52
4.	HRIS	71	8.79
5.	Information Management	46	5.69
6.	Human Resources	37	4.58
7.	Information Technology	29	3.59
8.	Management Information Systems	25	3.09
9.	Resources Information	19	2.35
10.	Knowledge Management	18	2.23
11.	E-HRM	17	2.10
12.	Personnel Management	16	1.98
13.	Human Computer Interaction	13	1.61
14.	Organizational Performance	12	1.49
15.	Strategic Planning	12	1.49
16.	Decision Support Systems	11	1.36
17.	Competitive Advantage	10	1.24
18.	Information Science	10	1.24
19.	Artificial Intelligence	9	1.11
20.	Project Management	9	1.11

3.10 Word cloud and text analysis of the document

In the current bibliometric analysis, the word cloud analysis was also produced for identifying most frequent words by using WordClouds (www.wordclouds.com), an online application aimed at choosing important words quickly appearing in the text (Hunt, Gao, & Xue, 2014). The word cloud analysis generated results with maximum number of words 200 and n scale

setting (see Figure 3). Apart from multiple keywords derived from the search in Scopus database regarding HRIS publications, there existed other words which were frequently used throughout the document. It could be observed from the analysis of word cloud that the visible and stand out words are HRIS, publications, research, management, human, information, documents, published, resource, paper. Afterwards, the frequency of top 20 words applied in the current document is also summarized and sorted based on the rank in Table 11.

Table 11. Frequency of top words applied in the document

Rank	Word	Frequency	Percent
1.	HRIS	57	7.05
2.	publications	48	5.94
3.	research	41	5.07
4.	management	35	4.33
5.	human	30	3.71
6.	information	26	3.22
7.	documents	22	2.72
8.	published	19	2.35
9.	resource	18	2.23
10.	paper	17	2.10
11.	articles	16	1.98
12.	review	16	1.98
13.	authors	14	1.73
14.	database	13	1.61
15.	scopus	12	1.49
16.	bibliometric	11	1.36
17.	systems	11	1.36
18.	analysis	9	1.11
19.	scientific	8	0.99
20.	citeScore	7	0.87

Figure 3. Word Cloud Analysis
Source: Authors' own study, 2023

4.0 Conclusion

The current study examined the global trend of scientific publications on HRIS since the year of 1991. A bibliometric based investigation has been carried out encompassing all the HRIS publications like journal articles, review, conference papers, book chapter, conference review, and book which were indexed in the database of Scopus. It has been shown in the findings that HRIS related research paper were mostly published in 2021 representing 8.05% of the total publications. An increasing trend of HRIS publications is observed starting from 1991 in spite of certain fluctuations. Additionally, the article was the most frequently applied publication type. The results of cross-tabulation highlighted that majority of the articles were published in 2006 representing 25 of the total HRIS published documents and 2021 was the most productive year for publishing maximum number of research paper based on HRIS. In terms of language application, English was the dominant language for HRIS publications worldwide. Likewise, the journal of Human Resources for Health published 20 articles till the year 2019. In terms of prolific authors, Eckhardt, Andreas was the first in publishing 18 papers on HRIS consisting 2.23 percent of overall publications. The findings also evidenced that the article by Strohmeier, S. was the top cited paper published in the Human Resource Management Review journal.

Furthermore, United States was the top publishing country from the period of 1991 to 2019 and the University of Pittsburgh was the most effective institution in United States. Majority of the scientific researches based on HRIS came from the area of Business, Management and Accounting. Finally, 'Information Systems' was the most frequently applied keyword in HRIS publications.

The limitations pertaining to this bibliometric review should be addressed. Initially, this study's data collection was limited to the Scopus database, and it made use of refinements such as "year," "document types," "source types," and "languages." Even though the Scopus database provides the most extensive collections of scholarly literature in business and social sciences, it rarely comprises all potentially related documents such as other journals, books, dissertations etc. Hence, future researchers are recommended to apply other international databases namely Google Scholar, Web of Science, or PubMed. Second, despite a full record as well as cited references are contained in the database, other useful information like differences between empirical and theoretical research papers, etc. were excluded from the current review. Thus, in order to characterize the bibliometric analysis, it is recommended for future study to do an extensive content analysis. Finally, the reduced sample of papers was another major limitation that restricted the interpretation of this study findings and limited us to study the co-word analysis. In spite of certain limitations, the current study is intended to provide relevant scholars with a panorama of global HRIS research along with the established guidelines for future research to the area and most pertinent research fields.

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