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"BIBLIOMETRIC ANALYSIS OF HR ANALYTICS USING J-GATE"

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Abstract:

This study explores the HR analytics literatureon the J-Gate database from 2012-2023. The study identifies the top 10 authors, journals, publications, countries, and publishers on HR Analytics. The result of the study shows that India and the USAare the top most countries in the contribution of HR analytics literature. The study highlighted that the highest publications were published on the subject, Business Management and Education & Careers. The author Michael Carty from the Education & Careers subject has published the highest number of articles in the duration of the selected period i.e. 2012-2023.The extent literature revealed that no bibliometric study has been conducted on HR analytics using the J-Gate database.

1. INTRODUCTION

In the digital age, managing human resources is critical because it drives technological advancements in recruiting, selection, training, and retention. Traditionally, human resource department decisions are mostly based on gut feeling, intuition, and expertise, which introduces biases; however, with the use of data-driven decision making, biases may be mitigated and eliminated. Machine learning and artificial intelligence have expanded the scope of human resource analytics. Human resource analytics is a critical step towards evidence-based HR management. Digitization in HRM practices helps us to acquire more data on employee habits and performance, among other things. Enterprises are largely concerned with managing human resources and data. HR Analytics helps HR professionals to connect HRM practices to corporate objectives and goals, train HR practitioners in data analytic skills, and make better decisions by utilizing strong knowledge and estimating.

2. J-GATE

J-Gate, an electronic gateway to worldwide e-journal literature, is the most effective and extensive platform for accessing research data. It was launched by Informatics India Limited in 2001. It provides database from over 55 million journal articles (with access to 10 million full-text articles) from 49,000+ journals encompassing several subject areas from all disciplines, including agriculture and biological sciences; arts and humanities; basic sciences; biomedical sciences; engineering and technology; and social and management sciences.

3. OBJECTIVES OF THE STUDY

The objectives for the study are as follows:
- To know about the full-text research articles on HR analytics available in duration 2012-2023.
- Determine the growth rate of HR articles between 2012 and 2023.
- To discover the most productive authors in HR analytics.
- Identify the top journals for HR analytics research.
- Identify the geographical distribution of major HR analytics articles from 2012-2023.
- To investigate the availability of HR analytics articles in the J-Gate database.

4. METHODOLOGY

The present study retrieves the data from the J-Gate database. For the search term "HR ANALYTICS" OR "HUMAN RESOURCE ANALYTICS" OR "PEOPLE ANALYTICS" OR "TALENT ANALYTICS" OR "WORKFORCE ANALYTICS" OR "HUMAN CAPITAL ANALYTICS" OR

"EMPLOYEE ANALYTICS" was used to get the research articles. This search gets 640 articles (1992-2023). For the bibliometric study, the last 12 years (2012-2023) data was analysed and retrieved 617 articles and 315 full text articles. The statistical data from the database was analysed in an excel spreadsheet to better comprehend the study objectives. The data was analysed to provide insight into the study subjects, productive authors, top ranked authors, year growth and geographical distribution of production.The data was analysed and presented in tables. Data analysis was conducted using both quantitative and inferential methodologies.

5. REVIEW OF LITERATURE

(Qamar & Samad, 2022), In the study, 125 Scopus database articles from 2008 to 2019 were analysed using bibliometric, network, and content analysis. the study was based on the content analysis of research clusters. They have identified the top cited articles, trending keywords, and clusters in HR analytics literature. (Bonilla-Chaves & Palos-Sánchez, 2023), for the study Bibliometrix and Biblioshiny software was used to analyse articles from Scopus and Web of Science databases. 281 articles from 2008 to 2022(July) were analysed on the topic HR Analytics. The study revealed that the United States has the most article citations per country, with 933, accounting for 21.7% of all citations. India has 223 citations, accounting for 8.92% of total citations. Co-authors from the United States and China have a higher level of collaboration on HR analytics. 398 authors (86.3%) have a single article in HR analytics. (VURAL ALLAHAM, 2022), study analysed the Web of Science academic database from 2010-2021 on HR Analytics. 178 published articles were analysed on the references, topics, authors, citations, and journals. The study's findings indicate that academic interest in HR analytics has grown in recent years. While HR professionals' competences, data quality, technical improvements, and collaboration with the IT department are the primary subjects, the literature appears to ignore the question of ethics.(Arora et al., 2023), in the study 127 articles on HR Analytics extracted from the Scopus database were thoroughly examined utilizing bibliometric analysis via VOSviewer, which included performance analysis and scientific mapping. It focuses on assessing geographical distribution, identifying notable authors, publications, journals, and keyword occurrences, and reviewing current literature. Human Resource Management Review was recognized as the most significant journal with the highest citations. Most publications come from Asian countries.

6. DATA ANALYSIS

6.1. RESEARCH AREA(ALL)

Figure 1 and Table 1. shows the top 10 study subjects in which most HR analytics publications have been published. The J-Gate database shows the 100 subjects related to the study. The table represent the maximum number of publications were published in the subjects of Business Management i.e. 196 followed by Education & careers 90, Personnel Management & Training 80, Sociology 65, Economics 54, Organizational change and Development 46, Information Science and Systems 44, Finance 40, Organisational Psychology 36, and Strategic Management & Business Policy 33.
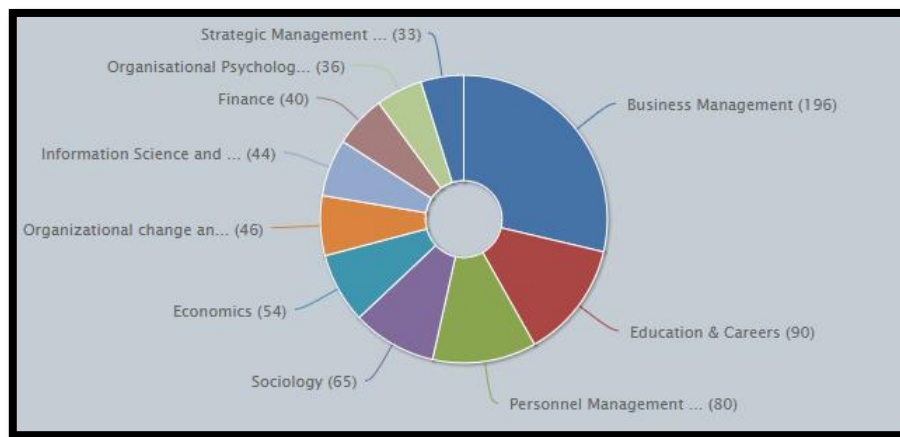

Figure 1: Analysis of top 10 research subject of all data, elaborated by J-Gate database

Table 1: Analysis of top 10 research subjects of all data

S.No.	Subjects	Articles
1	Business Management	196
2	Education & Careers	90
3	Personnel Management & Training	80
4	Sociology	65
5	Economics	54
6	Organizational change and Development	46
7	Information Science and Systems	44
8	Finance	40
9	Organisational Psychology	36
10	Strategic Management & Business Policy	33

6.2. RESEARCH AREA (FULL TEXT)

Figure 2 and Table 2. shows the top 10 study subjects of HR Analytics literatures which has full text articles. The table represent the maximum number of publications were published in the subjects of Business Management i.e. 105 followed by Sociology 53, Economics 32, Information Science and Systems 21, Finance 20, Education & Careers 16, Personnel Management & Training 16, Biotechnology (Engineering) 16, Electrical Engineering 14, Biomedical Engineering 12.
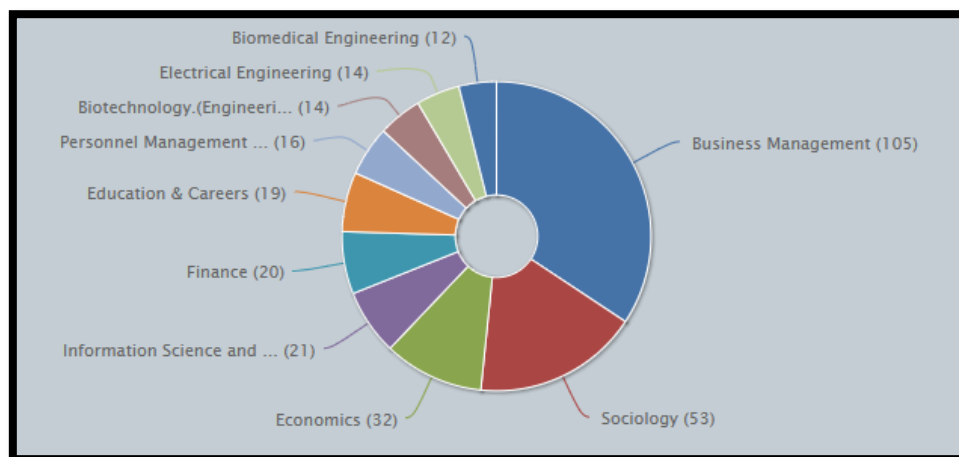

Figure 2: Analysis of top 10 research subject of full text articles, elaborated by J-Gate database

Table 2: Analysis of top 10 research subjects of full text articles

S.No.	Subjects	Articles
1	Business Management	105
2	Sociology	53
3	Economics	32
4	Information Science and Systems	21
5	Finance	20
6	Education & Careers	19
7	Personnel Management & Training	16
8	Biotechnology (Engineering)	14
9	Electrical Engineering	14
10	Biomedical Engineering	12

6.3. YEAR-WISE ANALYSIS

Table 2 shows HR Analytics articles by year from 2012 to 2023. In 2012, 15 papers were published, accounting for approximately 2.43 % of the overall production. In 2017, 84 articles were published, accounting for 13.45 % of the total. This was followed by 83 in 2022, 80 in 2020, 73 in 2021, 69 in 2019, 66 in 2023,63 in 2018, 41 in 2016, 31 in 2015, 17 in 2014, 8 in 2013. In year growth 2017 and 2022 were the most contributed years in overall 617 articles.

Table 3: Year-wise analysis

S.No.	Year	Articles	%
1	2023	53	8.59
2	2022	83	13.45
3	2021	73	11.83
4	2020	80	12.97
5	2019	69	11.18
6	2018	63	10.21
7	2017	84	13.61
8	2016	41	6.65
9	2015	31	5.02
10	2014	17	2.76
11	2013	8	1.30
12	2012	15	2.43

6.4 PRODUCTIVE AUTHORS

Table 4 depicts the analyses of top 10 productive authors in HR Analytics literatures. The Michael Carty has published the highest articles and top ranked authors as the database followed by Rob
Moss with 5 articles, Alec Levenson with 4 articles, Aizhan Tursunbayeva and other authors with 3 articles.

Table 4: Year-wise analysis

S.No.	Authors	Articles
1	Michael Carty	12
2	Rob Moss	5
3	Alec Levenson	4
4	Aizhan Tursunbayeva	3
5	AmbieIbiba	3
6	Beni Halvorsen	3
7	Cath Everett	3
8	Georgewill	3
9	Gonen Singer	3
10	Hila Chalutz Ben-Gal	3

6.5. HIGHEST RANKED JOURNALS

Figure 3 and Table 5 presents the analyses of highest ranked journals in the database. Personnel Today with 47 articles ranked the top journal from all the journals in the database, followed by People Matters with 38 articles, Journal of Organizational Effectiveness with 12 and Human Resource Management & Strategic HR Review with 11 articles.
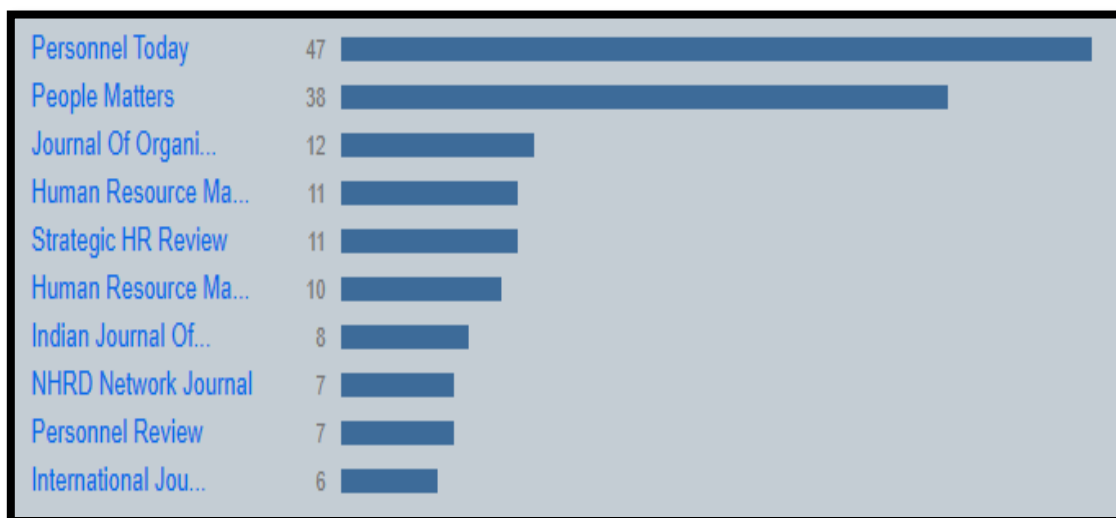

Figure 3: Analysis of top highest ranked Journals, elaborated by J-Gate database

Table 5: Highest Ranked Journals

S.No.	Journals	Articles
1	Personnel Today	47
2	People Matters	38
3	Journal of Organizational Effectiveness	12
4	Human Resource Management	11
5	Strategic HR Review	11
6	Human Resource Management International Digest	10
7	Indian Journal of Training and Development	8
8	NHRD Network Journal	7
9	Personnel Review	7
10	International Journal of Advanced Science and Technology	6

6.6. COUNTRIES DISTRIBUTION

Table 6 presents the top 10 country in HR Analytics literature. The analysis of data on countries shows that India is top publisher with 219 articles in HR Analytics literature followed by United States of America with 134 articles, United Kingdom with 108 articles, Netherlands with 30 articles.

Table 6: Country- Wise Distribution

S.No.	Country	Articles
1	India	219
2	United States of America	134
3	United Kingdom	108
4	Netherlands	30
5	Germany	24
6	Switzerland	22
7	Australia	11
8	Ukraine	7
9	Canada	6
10	Italy	6

6.7. SOURCES OF RANKING

Table 7 depicts the rankings of the articles in which articles has published. The analyses specify three rankingi.e. H-Index, SJR (SCImago journal Rank) and NAAS. H-Index and SJR consists 258 documents followed by NAAS with 23 documents.The **H-index** score is a typical academic statistic that compares the number of published articles to the number of times the author is cited.**SCImago Journal Rank (SJR)** is a measure of how frequently an average publication in each journal gets cited. The **National Academy of Agricultural sciences (NAAS)** score for science journals is a statistic for determining the quality, influence, and relevancy of scientific publications, notably in the field of agricultural sciences.

Table 7: Country- Wise Distribution

S.No.	Rankings	No. of Documents
1	H- Index	258
2	SJR	258
3	NAAS	23

7. FINDINGS

The study analysed HR Analytics research articles in the J-Gate database from 2012-2023. The J-Gate database shows that 617 papers were published over the time, in which 314 full articles were available. The most ranked journal in HR Analytics literature is Personnel Today with 209 publications. Michael Carty is the most productive author. India leads the list with 219 articles, followed by the United States of America with 134 articles. Highest publications were published in the year 2017 and 2022. Least publications were published in 2013.

8. CONCLUSION

The study aimed to evaluate the 'HR Analytics' literature trend in J-Gate database. The authors conducted a bibliometric analysis of published literature on HR Analytics in J-Gate, categorizing it by research subject, top authors, year, and country. The topic HR Analytics is growing from the year 2012, previously few articles were published. The author from India published the most publication in the research study. This study solely examines search results from the J-Gate database and does not include publications from other journals or databases. Further research is needed in this vast field. This analysis concludes that 'Personnel Today' is a leading journal of papers on 'HR Analytics'. The findings of the study will help scholars and academicians in identifying the top authors for collaboration and for conductings systematic review studies.

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