A Bibliometric research on Journal of Information and Organizational Sciences During 2012–2021

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Abstract

It is critical to examine the nature of research advancement in related research fields in order to assess research productivity and comprehend current trends in the field of research. This is all about researching the Journal of Information and Organizational Sciences. There are a total of 148 material published in 20 issues and 10 volumes between 2012 and 2021 were consulted for this study. This work investigated the distribution of contributions by volume, issue, and year, the authorship patterns of published articles by volume, the average number of citations per article by volume, and the average number of pages in each contribution by volume. The collected data has been examined, tabulated.

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Keywords

Bibliometricanalysis; Authorship pattern; Organizational Sciences; Citation analysis; authorship pattern

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1. Introduction

The field of library and information science has developed a number of quantitative techniques for conducting research on various topics (LIS). Librametrics, bibliometrics, scientometrics, informetrics, webometrics, netometrics, and cybermetrics are just a few of the LIS metrics that are constantly evolving (Khan, 2016). The analysis of published literature in a field using statistical methods and tools is known as bibliometrics. Alan Pritchard coined the phrase "In 1969, a paper titled "Is it Statistical Bibliography or Bibliometrics?" was published. He described it as follows: "the application of mathematical and statistical techniques to literature and other forms of communication". Simply put, bibliometrics is the study and measurement of all forms of written communication and their authors' publication patterns, according to Potter (1981). Primary journals are regarded as the primary vehicle for disseminating research results and information about new ideas in a discipline and are an important source of information. They also aid in the comprehensive study of a subject and serve as indicators of the growth of literature in any field of knowledge (Garg, Lamba& Singh, 2020). Between 2012 and 2021, the current paper depicts scholarly communication to the Journal of Information and Organizational Sciences. Journal of Information and Organizational Sciences has been publishing a two-issue international peer-reviewed online journal in Science and Technology since 2012.

The Journal of Information and Organizational Sciences has covered the majority of professional areas in Science and Technology, with a number of issues dedicated to topics such as global research mapping, Cloud Computing performance, Bigdata, Waste water purifying, Humman Resource management, Fuzzy Logic, and the Journal also covers technology and interdisciplinary research. The current study attempted to examine the distribution of publications in the journal Journal of Information and Organizational Sciences between 2012 and 2021. The year, subject, degree of collaboration among authors, authorship pattern, and length of the articles are all investigated in this paper. In the present study proceeds as follows: Section 2 discusses the literature study, Section 3 presents Objectives of the study, Section 4 exhibits methodology and data, Section 5 presents the data analysis and Section 6 highlights the findings and conclusions.

2. Review of Literature

Librarians and Informatics Project Fellow Vijayakumar, M., Padmama, S., Kumar, and Sampat, B. T. 2000 published a study to define an information use model. This study is based on the references attached to the Graduate Library and Information Papers from 1995 to 1999. Davarpanakh, M.R.and S.A. Aslekia (2008) conducted a quantitative study on productivity, characteristics and various aspects of global publications in LIIS (Library and Information Science). In this study, they looked at 894 articles published in 56 LIS journals between 2000 and 2004. Nattar, S. 2009 performed a scientific analysis of 829 papers published in the Indian Journal of Physics between 2004 and 2008 and analyzed the distribution of papers, the characteristics of authors, the geographical distribution of contributions, and the number of pages used in each volume. Observed Anil Kumar et al., 2008, focused on impact factors, publication trends, author structure, and author institutional collaboration, type of paper, author affiliation, keyword analysis, author country, and link structure of studies. Rajendran, P.2011 conducted a Scientometric Analysis of 633 articles published in five volumes containing 60 issues of the Journal of Scientific and Industrial Research from 2005 to 2009. R. Poonkothai. 2012.has examined the contributions in volumes 26-35 in terms of authorship, volume, and page count in each issue, among other things. The Journal of Biosciences published 40 issues in ten volumes between 2001 and 2010. Ramachandran, Anil. He presented the results of bibliographies compiled from theses submitted in physical education and sports sciences in the states of Kerala and Tamil Nadu in his study published in 2012. Suradkar, Priya A. 2012 presented a study that included 5521 citations and 532 articles from 30 issues of 5 volumes of a Journal of Documentation from 2007 to 2011.P Kanagavel et al.A Scientometric Analysis of Research Productivity in Wind Power was carried out in 2013 with a total of 325 records obtained from the Web of Science for 5 calendar years spanning from 2008 to 2012. J P S Kumaravel and T S Seethalakshmi. 2013 attempted to analyse scholarly publications on biomedical research in Thailand from 1991 to 2012. Thanuskodi, S. and Venkatsan, M.N. 2014 quantitatively examined the growth and development of nuclear power generation in terms of publication output as reflected in the Web of Science (WOS) database from 1980 to 2013. Madhu, Bala, and MahenderPratap Singh. 316 scholarly communications published in the Indian Journal of Biochemistry and Bio-Physics in 2014 were reviewed. Swapan, Paul, Gayatri, and Deoghuria. 2014 looked at the bibliographies of articles published in the Indian Journal of Physics between 2004 and 2013. Velmurugan, C., and N. Radhakrishnan (2015) searched the Webology journal from 2007 to 2013 for quantitative research. Soumen, Maity, Asish, and Teli. 2015 examined and analysed all issues of all volumes published by journals from 2004 to 2014. A. Vellaichamy and R. Jeyshankar (2015) carried out a bibliometric analysis of 158 papers published in the journal "Webology" between 2004 and 2013.Kumari, N. Prasanna, Amsaveni, N and Surulinathi, M.2015 have presented a global level perspective of Occupational Therapy research output during the period of 1989 to 2015.Paliwal, Sangeeta. 2015 has made an analysis of 177 research papers published in five volumes 56 to 60, (2009 - 2013) in Annals of library and Information studies.

3.Objectives

The current study's goal is to describe the characteristics of scientific output from researchers who use bibliometric methods, both within and outside the field of Science and Technology.

In particular, we want to compare the differences between documents and authors from different fields of knowledge in terms of the following:

1. To find out the entire published article and citations of the said journal between 2012 to 2021.
2. To measure the year-wise published articles of the said journal between 2012 to 2021
3. Authorship, degree of collaboration between authors, interaction between investigators in different areas.
4. Reference to theoretical underpinnings of the discipline, the process of knowledge generation, and types of studies performed.
5. To find out authorship patterns during 2012-2021 in the said journal;
6. To study the authors productivity.

4. Methods and Data

The bibliometric method originated from library and information science research involving large amounts

of bibliographic material (Broadus, 1987; Pritchard, 1969). A bibliometric study that analyzes and categorizes bibliographic material to create a representative summary of the existing literature. This study is based on a bibliographic analysis used to refine articles published in the Journal of Information and Organizational Sciences over a period of 10 years (2012–2021) and data were collected from the website (https://jios.foi). .hr /index.PHP). A total of 148 publications in 10 volumes were retrieved from the homepage, and the data were analyzed using MS-Excel. The analysis was classified according to publication results, subject analysis, degree of collaboration, author model, citation distribution, and paper size.

5. Data Analysis

Volume-wise distribution of articles

Table 1 show the annual growth of publications in the Journal of Information and Organizational Sciences. Total for 2012-2021. 148 scientific publications have been published. The analysis showed an upward trend from 2020 to 2021 and a downward trend from 2019 to 2016. The first 3 years (2012, 2013, 2014) show very low research productivity compared to previous years. It can be seen from the table that most of the publications were released in 2021 and had the lowest performance in 2013. Also, the highest number of publications (19 and 29) came from issues 1 and 2.

Table1: Volume-wise distribution of articles

Year	Vol. No	Issues	Issue no.1	Issue no.2	Total Pub	%
2012	36	2	6	7	13	8.784
2013	37	2	5	5	10	6.757
2014	38	2	5	6	11	7.432
2015	39	2	7	7	14	9.459
2016	40	2	7	5	12	8.108
2017	41	2	7	9	16	10.81
2018	42	2	6	6	12	8.108
2019	43	2	6	6	12	8.108
2020	44	2	9	10	19	12.84
2021	45	2	15	14	29	19.59
Total		**20**	**73**	**75**	**148**	**100**

Author Productivity

Table 2: Author Productivity

Year of Publication	Number of Publication	Number of Authors	Average Publication Per Author
2012	13	28	0.4642
2013	10	26	0.3846
2014	11	27	0.4074
2015	14	35	0.4
2016	12	29	0.4137
2017	16	35	0.4571
2018	12	23	0.5217
2019	12	30	0.4
2020	19	52	0.3653
2021	29	70	0.4142
Total	**148**	**355**	**0.4169**

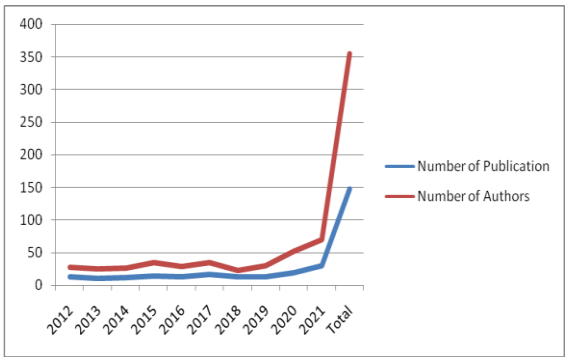


Figure-1: Author Productivity

Table 2 and Figure 1 show author performance for research articles published in the Journal of Information and Organizational Sciences from 2012 to 2021. The highest average number of publications per author in 2018 was (0.51). As a result of the analysis, a total of 355 authors produced 148 articles, with an average of 0.41 articles per author.

Pattern of Authorship

Co-authorship reveals the author model and the relationship between co-authors (Koseoglu, 2016; Peters & Van Raan, 1991). Table 3 and Figure 3 show the structure of paper authors by year. The number of papers published by two authors (54) was the highest, followed by one author (28) and three authors (51). It was also found that authors published more collaborative articles (36.49%) than three authored articles (34.4%). 46%) Publications. This means that researchers are more interested in collaborative research than independent research.

Table 3: Authorship Pattern

Sl no	Authors	Publication Years										Total	% age
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
1	Single	4	1	2	2	1	3	5	1	2	7	28	18.92
2	Double	4	3	5	5	6	7	3	6	6	9	54	36.49
3	Three	4	5	2	5	4	6	4	4	7	10	51	34.46
4	Four	1	1	1	2	1	0	0	0	3	1	10	6.757
5	Five	0	0	1	0	0	0	0	1	1	1	4	2.703
6	Six	0	0	0	0	0	0	0	0	0	1	1	0.676
Total		**13**	**10**	**11**	**14**	**12**	**16**	**12**	**12**	**19**	**29**	**148**	100

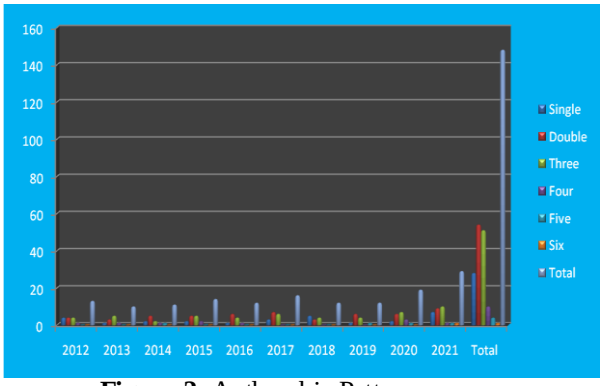


Figure 2: Authorship Pattern

Degree of Collaboration

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Table 4 shows the degree of collaboration of publication published in Journal of Information and Organizational Sciences from 2012 to 2021. To calculate the degree of collaboration among authors, the formula given by Subramanian (1983) is used which is expressed mathematically as:

Table-4: Degree of Collaboration among authors

Sl. No	Year	Single Authored (NS)	Multi Authored (NM)	Total (NS+NM)	DC
1	2012	4	9	13	0.41
2	2013	1	9	10	0.47
3	2014	2	9	11	0.45
4	2015	2	12	14	0.46
5	2016	1	11	12	0.48
6	2017	3	13	16	0.45
7	2018	5	7	12	0.37
8	2019	1	11	12	0.48
9	2020	2	17	19	0.47
10	2021	7	22	29	0.43
Total		**28**	**120**	**148**	**0.45**

$$DC = \frac{Nm}{Nm + Ns}$$

Where,

DC= Degree of Collaboration

Nm= Multiple Authored Publication

Ns = Single Authored Publications

The results clearly show an average degree of collaboration among authors in a particular journal of 0.45, indicating a growing trend for collaboration in the Journal of Information and Organizational Sciences. In 2019 and 2016, the degree of cooperation was the highest at 0.48, and in 2018, the degree of cooperation was the lowest at 0.37..

Publication Size

Table5: Length of Pages

Sl. No	Size of publication in Pages	Publications	Cumulative	%	Cumulative Percentage
1	Three-Four	0	0	0	0
2	Five-Six	1	1	0.68	0.68
3	Seven-Eight	5	6	3.38	4.05
4	Nine-Ten	10	16	6.76	10.81
5	Eleven - Fifteen	43	59	29.05	39.86
6	Sixteen - Twenty	46	105	31.08	70.94
7	Above Twenty	43	148	29.05	100
Total		**148**		**100**	

The research document has been categorized into different ranges right from 3 to 20 pages category and the last category is marked as "more than 20 pages". According to Table 5, out of 148 papers, 46 (31.08%) were published in 16-20 pages, followed by 43

(29.05%) in 11-15 and Above Twenty Pages. 10 papers were published in 9-10 pages, 5 papers in 7-8 pages, and 1 (0.68%) paper in less pages. The analysis clearly shows that the majority of authors published their research papers in lengths ranging from 16 to 20 pages.

Reference distribution pattern

Table-6: Reference distribution pattern

Year	Vol. No.	No. of Articles	No. of references (Issue wise)		Total Refer-ences (%)	Cumu lative Refer-ences	%
			No1	2			
2012	36	13	146	154	300	300	5.471
2013	37	10	141	107	248	548	9.995
2014	38	11	122	182	304	852	15.54
2015	39	14	262	406	668	1520	27.72
2016	40	12	251	118	369	1889	34.45
2017	41	16	233	287	520	2409	43.94
2018	42	12	229	307	536	2945	53.71
2019	43	12	273	253	526	3471	63.3
2020	44	19	404	291	695	4166	75.98
2021	45	29	666	651	1317	5483	100
TOTAL		**148**	**2727**	**2756**	**5483**		

Table 6 depicts the pattern of reference distribution in the Journal of Information and Organizational Sciences from 2012 to 2021. The most notable feature of the Journal of Information and Organizational Sciences was its clearly high percentage of articles with references. 5483 references appear in 148 articles published in the specific journal during the time period of the current study. The year 2021 had the most references, with 1317, accounting for 24.01% of all references. And the lowest was in 2013, with 248, accounting for 4.52% of all references.

Authorship Pattern of references

Table 7: Authorship Pattern of references

Sl. No	Author type	No. of References in Issue-wise		Total References (%)	Total References (%)	Cumulative References (%)
		Issue no.1	Issue no.2			
1	Single	561	406	967	967	17.64
2	Double	861	1207	2068	3035	55.35
3	Three	859	1020	1879	4914	89.62
4	Four	310	52	362	5276	96.22
5	Five	76	71	147	5423	98.91
6	Six	60	0	60	5483	100
Total		**2727**	**2756**	**5483**		

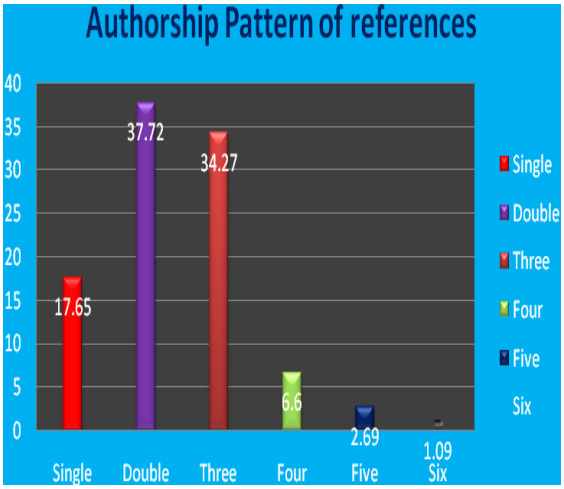


Figure-3: Authorship Pattern of Reference

Table 7 and Figure 4 show the authorship pattern of references for publications published in the Journal of Information and Organizational Sciences between 2012 and 2021, with a total of 5483 references. A double author cited the most references (2068, accounting for 37.72%), followed by three authors (1879, accounting for 34.27%). Single authors cited 967 references, accounting for 17.65% of the total. Furthermore, only one article was published by six authors, totaling 60 (1.09%) references.

6. Findings and Conclusion

Between 2012 and 2021, the Journal of Information and Organizational Sciences' publication productivity was examined. The results show that although the flow of manuscripts to the journal increased over the years, it started off high (2020 & 2021). 355 writers contributed to a total of 148 papers that were published. The majority of the contributions were published in 2020 and 2021, with the total number of articles published by writers being 19 (12.84%) and 29 (19.59). Additionally, the data showed that throughout the study period, single writers published

28 (18.92%), double authors published 54 (36.49%), three authors published 51 (34.46%), four authors published 10 (6.75%), five authors published 4 (2.70%), and six authors produced one (0.67%) publications.In 148 articles, 5483 references were cited. Furthermore, the study discovered that the overall Degree of Collaboration (DC) for five years was 0.45, with the value of DC being highest in 2016 and 2019 at 0.48 and lowest in 2013 and 2020 at 0.47. Similarly, subject analysis revealed that the majority of Bibliometrics, Scientometrics, and Electronic Resources research papers were published during the ten-year study period. Other areas of interest for Journal of Information and Organizational Sciences researchers included information seeking behaviour, which has long been one of the most researched. Because of its growing importance worldwide, information and communication technology has also gained popularity. Such studies evaluate the research giving a direction for new areas to be explored and the journal bibliometric studies helps to identify the research trends of a particular field of research.

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