

A Study of Scientometric Analysis of the Journal “Interdisciplinary Journal of Information, Knowledge and Management”

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Abstract

The present study deals with a scientometric analysis of the Journal “Interdisciplinary Journal of Information, Knowledge and Management” and analyzed the articles published during the period 2008-2018. The study focuses on various aspect of the journal such as, growth of papers (year wise), authorship pattern and degree of collaboration, institutions involved and average of citations.

Keywords: Scientometrics, DOAJ, SCImago, SCOPUS

Introduction

Scientometrics is the study of measuring and analysing science, technology and innovation. Major research issues include the measurement of impact, reference sets of articles to investigate the impact of journals and institutes, understanding of scientific citations, mapping scientific fields and the production of indicators for use in policy and management contexts. In practice there is a significant overlap between scientometrics and other scientific fields such as bibliometrics, information systems, information science and science of science policy.

In academics, journals are scholarly publication of research articles. Ranking of journal means the evaluation of published journal's impact factor and quality. It reflects the place of journal within its field. Library studies in an interdisciplinary / multidisciplinary subject it includes information technology, General management, Knowledge Management, practices, perspectives, education, organization, preservation, etc.

Scopus is a bibliographic database owned by the International Scientific Journal Publisher contains abstract and citations for academic journals. It covers more than 22,000 titles and over 5000 publishers. SCImago Journal Rank (SJR Indicator) is a measure of scientific influence on scholarly journals. It has been developed by using the information available in the citation database Scopus.

The three main methods of ranking, citation analysis and user judgment has been discussed in the paper journal ranking & selection (Singleton, 1976). Effectiveness of journal ranking scheme as tool for locating the information is studied (stringer et al., 2008)

Gupta, B.M. (2012) in his article “Sri Lanka S&T output during 2001- 2010: A Scientometric Assessment,” examines the research productivity of Sri Lanka in S&T during years from 2001-2010. This was done for several factors like its growth and global publications share, citation impact, share of international collaborative papers, contribution of major collaborative partner countries, contribution to various subject fields, geographical distribution of its papers, evaluation of the characteristics on its high productive institutions, authors and papers and the journals publishing the research output (Rajeev, 2015)

Objective of the Study

The main objective of the study is to know about the Scientometrics applications on the Journal “Interdisciplinary Journal of Information, Knowledge and Management”,

1. To study the growth rate of articles published in the Journal
2. To know the Ranking of the journals
3. To find out the authorship pattern
4. To study the citation analysis of the journal

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Methodology

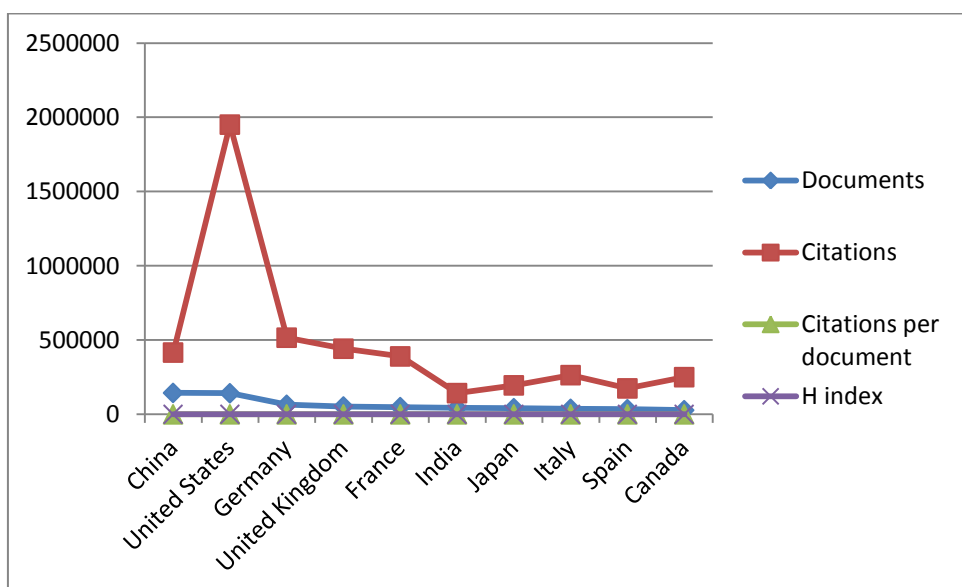
To data presented in this paper has been accessed from Scopus, the bibliographic abstracting & Indexing database, SCImago Journal Ranking

Indicator. The data has been collected and analyzed from the year 2008-2018.

Data Analysis and Interpretation

Table No.1: Computer Science Subject (Misc.) 2008-2018

Rank	Country	Documents	Citations	Citations per document	H index
1	China	144150	415964	2.89	136
2	United States	142018	1950927	13.74	391
3	Germany	64343	516011	8.02	172
4	United Kingdom	52875	441767	8.35	180
5	France	48672	389880	8.01	160
6	India	43924	142781	3.25	99
7	Japan	41436	195041	4.71	123
8	Italy	37031	263766	7.12	133
9	Spain	34432	174544	5.07	101
10	Canada	27711	250197	9.03	147

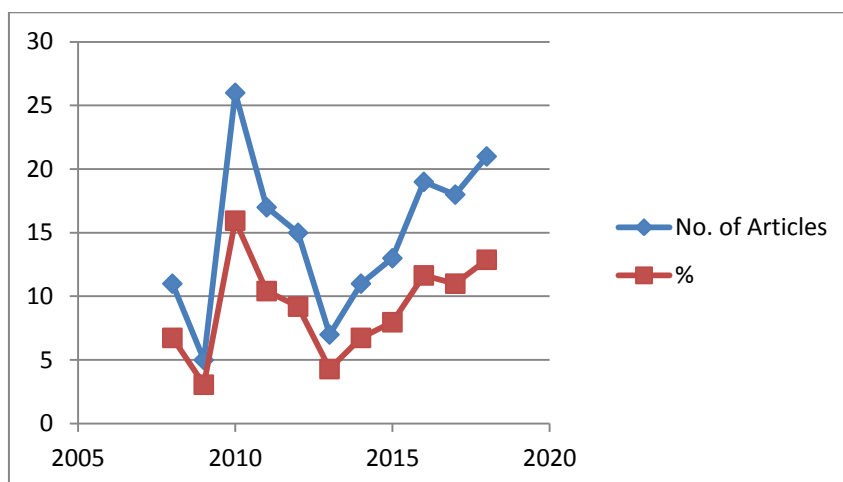


The above Table No 1 Shows that in the field of Computer Science (Miscellaneous) subject around 198 countries have produced articles. Out of which, only top 10 has been taken. Though China has

produced highest number of articles, United States of America stood first in terms of highest no of citations & h- index. India occupies 6th in the position.

Table No.2 Year wise contributions of Articles in the selected journal:

Sl. No	Year	No. of Articles	%
1	2008	11	6.74
2	2009	5	3.06
3	2010	26	15.95
4	2011	17	10.42
5	2012	15	9.20
6	2013	7	4.29
7	2014	11	6.74
8	2015	13	7.97
9	2016	19	11.65
10	2017	18	11
11	2018	21	12.88
Total		163	100



From the above table no 2, we can observe that the number of articles published in the journal is increasing in the last five years compared to previous years. The highest number of articles 26 was

published in the year 2010, followed by 21 articles in the year 2018, least number of articles 07 published in the year 2013 but from 2014 there is gradual increase in the number of articles.

Table No.3 Authorship pattern of Contributions:

Year	Single Author	2 Authors	3 Authors	4 Authors	5+ Authors	$C = \frac{Nm}{Nm + Ns}$
2008	4	3	1	2	0	0.6
2009	0	2	0	2	0	1
2010	2	14	7	1	1	0.92
2011	3	5	5	2	0	0.8
2012	4	6	2	0	1	0.69
2013	0	5	0	1	0	1
2014	0	2	4	4	0	1
2015	4	4	3	2	0	0.44
2016	6	5	7	3	0	0.71
2017	4	7	8	4	0	0.82
2018	3	8	6	6	0	0.86
Total	30	61	43	27	2	

Degree of Collaboration

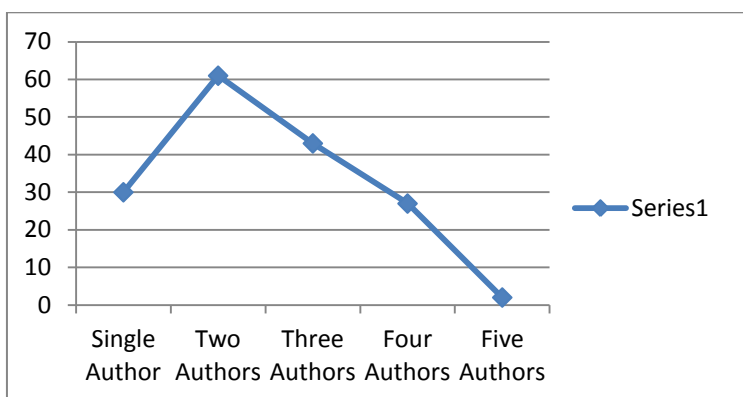
The degree of collaboration is defined as the ratio of the number of collaborative research papers to the total number of research papers in the discipline during a certain period of time. The formula suggested by Subramanyam is used in this study. It is expressed as where;

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

The degree collaboration formed using the Subramanyam formula C is the degree of collaboration in a discipline. Nm is the number of multi-authored research papers in the discipline published during a year. Ns is the number of single authored research papers in the discipline published during a year.

It is observed in this study that the degree of collaboration highest with 1.0 in the year 2009, 2013 and 2015 followed by 0.92 in the year 2010

Author	Total No. of Authors
Single Author	30
Two Authors	61
Three Authors	43
Four Authors	27
Five Authors	2

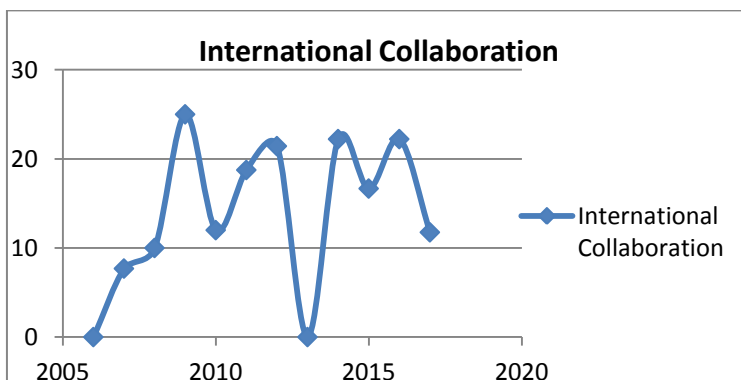


From the above table, we can observe that, the numbers of authors producing more number of articles to the Journal are two with 61 and three authors with 43 compare to the single author or five

Year	Total No.of Authors	Single Author	Multi Author	Degree of collaboration
2008	10	4	6	1.6
2009	4	0	4	2
2010	25	2	23	11.5
2011	15	3	12	1.25
2012	13	4	9	1.44
2013	6	0	6	1
2014	10	0	10	1
2015	13	4	9	1.44
2016	21	6	15	1.4
2017	23	4	19	1.21
2018	23	3	20	1.15
Total	163	30	133	1.2

Table No.4 International Collaboration

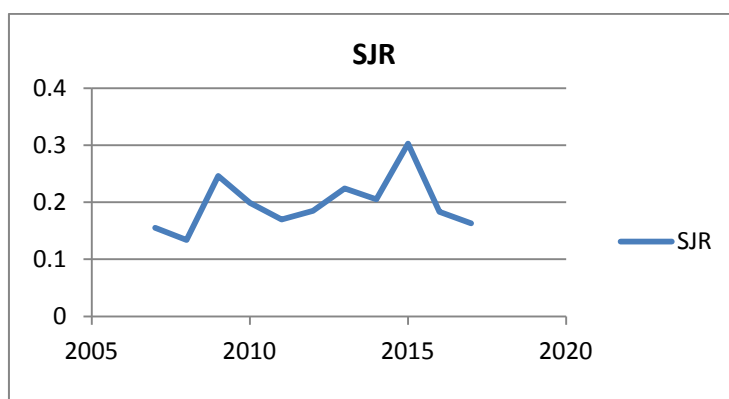
Year	International Collaboration
2008	10
2009	25
2010	12
2011	18.75
2012	21.43
2013	0
2014	22.22
2015	16.67
2016	22.22
2017	11.76



From the above table, we can observe that, the international collaboration of articles 25 is highest in the year 2009 compared to the subsequent years it is interesting to note that no collaboration in the year 2013, equal collaboration found in the year 2014 and 2016

Table No.5 Journal Ranking:

Year	Journal Ranking
2008	0.134
2009	0.246
2010	0.199
2011	0.17
2012	0.185
2013	0.224
2014	0.205
2015	0.303
2016	0.183
2017	0.163



We can observe from the above table that, the Ranking of the Journal "Interdisciplinary Journal of Information, Knowledge and Management" is highest in the year 2015 with 0.303 compared to other years 0.17 in the year 2011

Findings

The findings are based on the analysis of collected data appended in 163 articles in the journal "Interdisciplinary Journal of Information, knowledge and management

The Journal is contributed by more number of articles in the Year 2010 has maximum articles contributed.

Majority of the contributions are contributed by two authors.

China and USA are the leading countries in terms of article contributions.

More International collaboration for research is found in the year 2009

Degree of collaboration highest in the year 2010

Journal ranking is gradually increased and decreased but highest in the year 2015.

Conclusion

Over view of the present study is that this multidisciplinary journals is contributed more by multiple authors than the single author and USA is

more citations with good h-index compared to the other countries, India can contribute to this journal by doing more research in this area.

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