Asian Journal of Information Science and Technology (2011-2017): A Bibliometric Study

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Abstract - **This paper analyses publication pattern in the journal titled "Asian Journal of Information Science and Technology for the period between 2011to 2017. The analyses cover mainly the number of articles, authorship pattern, year wise distribution of journals etc. The result showed that out of 151 articles single author contributed 34 (22.5 %) articles 117 (77.5 %) articles were contributed by joint authors.**
Keywords: **Bibliometrics, Authorship Pattern, Asian journal of Information Science and Technology and AJIST**

I. INTRODUCTION

Generally bibliometrics is an application of mathematical and statistical methods to books and other mass media of communication. In recent years, the bibliometric techniques have become very popular. The literature on bibliometrics has been growing over the two decades. It reveals that it is a measurement of the pattern of all forms of written communication and their authors. The new form and component of professionalized communication system should consist of foot-notes and reference with the text written in an impersonal language and also elimination of subjectivity.

While communicating the information through papers, the following attributes should be borne in mind. Every paper should have a set of document descriptions such as author, title and imprints of the journals in which it appeared. Functionally these document descriptors of a paper help to identify the paper uniquely. Sometimes the authorship of the paper is assigned to more than one person. In most modern research papers, two or more authors are responsible for the research communicated by them. The title is structured with a certain number of keywords and they have some correlation to contents, and the subject of a paper is a combination of a number of factors or categories. It is evident that the communication system and the network of journals play a very important role in the exchange of scientific and technical information.

II. LITERATURE REVIEW

Thanuskodi (2012) undertook the bibliometric analysis of the journal titled Indian journal of Agricultural Research for the period from 2001 to 2010. The analysis covers mainly the number of articles, authorship, pattern, subject wise distribution of articles, average number of references per articles, forms of documents cited, year wise distribution of cited journals etc. The result showed that out of 602 articles joint authors contributed 564 articles while the rest 38 articles were contributed by single author. Study reveals that most of the contributions are from India with 98.67 % and the rest 1.33 percent only from foreign sources.

Chanda Arya and Superna Sharma (2011) highlight the collaboration in research and authorship trend in the area of veterinary sciences all over the world with special reference to India. The study was based on the data collected from 'CABI abstracts' for the period of 2006 to 2010. The findings of the study revealed that collaborative research has been preferred by the scientists over that of solitary research. Average degree of collaboration was found to be 0.84, which also indicates dominance of collaborative research over solo research. Subject analysis showed good research in the area of animal nutrition and veterinary physiology.

Pallab Pradhan and Rajesh Chandrakar (2011) found that more of Indian studies (26.75 %) are in the area of bibliometrics, webometrics, and infometrics. Mostly, Indian author's contribution to scholarly publication was a move towards single or two authors as 75.88 % articles were contributed by single or two authors. International collaboration of Indian authors have less representation i.e. 0.23 % foreign authors per contribution. Indian contribution in foreign journals is very less.

III. OBJECTIVES OF THE STUDY

1. To Study Year-wise Distribution of Papers.
2. To Study the Authorship Pattern of Papers.
3. To Study the Authorship Collaboration.
4. To Study Year-wise Length of Papers.
5. To Study Length- wise Distributions of Papers.

IV. RESEARCH METHODOLOGY

The methodology applied in the present study is bibliometric analysis, which is used to study in detail the bibliographic features of the articles and analysis of the references at the end of each article published in AJIST

from 2011-2017. For this the relevant data are collected and recorded.

Then they are tabulated and analyses for making observations. A Total of 14 issues of the Asian Journal of Information Science and Technology have been taken for the study.

V. ANALYSIS OF THE STUDY

The journal published 151 research papers during the period of study i.e. from 2011 to 2017. The above table showed that the maximum numbers of articles were published in the year 2013 and minimum in the year 2015 articles.

TABLE I YEAR WISE DISTRIBUTION OF ARTICLES

Year	Vol. No.	No. of Issues	No. of Contribution	%
2011	1	2	24	15.9
2012	2	2	25	16.6
2013	3	2	30	19.9
2014	4	2	20	13.2
2015	5	2	13	8.6
2016	6	2	15	9.9
2017	7	2	24	15.9
Total		14	151	

TABLE II YEAR-WISE DISTRIBUTION OF OUTPUT

Year	No. of Output	Cum No. of Output	W1	W2	R(a)	Mean R(a) 1-2	Doubling time DT(A)	M Dt(a) 1-2
2011	24		3.18					
2012	25	49	3.22	3.89	0.67		1.03	
2013	30	79	3.40	4.37	0.97		0.71	
2014	20	99	2.99	4.59	1.6		0.43	
2015	13	112	2.56	4.72	2.16		0.32	
2016	15	127	2.71	4.84	2.13		0.33	
2017	24	151	3.18	5.02	1.84		0.38	
	151					1.56		3.2

Table II indicates the relative growth rates of articles output and also the doubling time for the publication. It could be observed that the relative growth rates of all sources of research output have from 0.67 in 2012 and 1.84 in 2017. The mean relative growth rates for the periods 2011-2017. The study period has witnessed a mean relative growth rate of 1.56. The doubling time for publication have from 1.03 in 2012 to 0.38 in 2017. The mean doubling time for publications for the periods of 2011-2017 was 3.2.

TABLE III YEAR-WISE AUTHORSHIP PATTERN

Year	1 Author	%	2 Author	%	3 Author	%	4 Author	%	Total
2011	9	26.47	10	11.4	3	12	2	50	24
2012	4	11.76	16	18.2	4	16	1	25	25
2013	4	11.76	16	18.2	10	40	-	-	30
2014	5	14.7	11	12.5	3	12	1	25	20
2015	3	8.8	8	9.1	2	8	-	-	13
2016	4	11.76	9	10.2	2	8	-	-	15
2017	5	14.7	18	20.4	1	4	-	-	24
Total	34		88		25		4		

Table III reveals the authorship pattern of the articles published during the period of study. The largest number of articles had two authors 88. This is followed by single author 34, three authors 25, four authors 4 of the total articles.

Degree of Collaboration: It is clear from the above analysis that the percentage of multi-authored papers is more than that of single authored papers. To determine the extent of collaboration in quantitative terms, the formula given by K. Subramanyam is used.

The formula is
$C=Nm/Nm+Ns$
$C = 117/117+34 = 0.77$

TABLE IV YEAR-WISE AUTHORSHIP PATTERN

Year	Single Author	%	Multi Author	%	Total No. of Contributions	Degree of Collaboration C=Nm/Nm+Ns
2011	9	26.4	15	12.8	24	0.63
2012	4	11.8	21	18	25	0.84
2013	4	11.8	26	22.2	30	0.87
2014	5	14.7	15	12.8	20	0.75
2015	3	8.8	10	8.5	13	0.77
2016	4	11.8	11	9.4	15	0.73
2017	5	14.7	19	16.3	24	0.79
Total	34		117		151	

Thus the degree of collaboration of the Asian Journal of Information Science and Technology is 0.77. The distribution of degree of collaboration over the years from 2011 to 2017 is presented in table V.

TABLE V DISTRIBUTION OF AUTHORSHIP PATTERN

Author	No of Contribution	%
Single Author	34	22.5
Co Author	117	77.5
Total	151	100

Table V shows that the authorship pattern over 7 years of AJIST. Out of 151 publications during 2011-2017 the single author contribution is 22.5 percentages. 117 contributions, 77.5 percentage co-authors.

TABLE VI LENGTH OF ARTICLE

Year	1-5	%	6-10	%	Total
2011	10	12.2	14	20.3	24
2012	17	20.7	8	11.6	25
2013	17	20.7	13	18.9	30
2014	9	10.9	11	15.9	20
2015	7	8.5	6	8.7	13
2016	9	10.9	6	8.7	15
2017	13	15.9	11	15.9	24

Table VI reveals that the majority of articles 82 have the length of 1-5 pages followed by 69Articles with 6-10 pages.

Table VII shows that the Length Wise pattern over 7 years of AJIST. Out of 151 publications during 2011-2017 the Length of 1-5 pages is 54.3 percentages. 6-10 pages are 45.7 percentages.

TABLE VII DISTRIBUTIONS OF ARTICLES BY LENGTH-WISE

Length	No of Contribution	%
1-5	82	54.3
6-10	69	45.7
Total	151	

VI. CONCLUSION

The journal has only a short history of nearly 7 years. The journal has published 151 articles during the period of study. The maximum numbers of contributors are two authors with 58.3 %. Majority of articles 82 (54.3 %) have the length of 1-5 pages.

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