

Authorship Trend and Degree of Collaboration in Prabandhan: An Indian Journal of Management

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Abstract

The present paper examined Authorship pattern and Degree of Collaboration in Indian Journal of Management. Scientific research is becoming an increasingly collaborative endeavor. The nature and extent of collaboration vary from one discipline to another, and it depends upon such factors as the nature of the research problem, the research environment. The extent of collaboration cannot be easily determined by traditional methods of survey and observation. Bibliometric methods offer a convenient and non-reactive tool for studying collaboration in research. The required data has been collected from the 'Prabandhan: Indian Journal of Management' published during the period 2008-2011. The result shows that multi-authored papers contribution is more in number (54.37%) compared to single authored papers (45.63%). The study also focuses the degree of collaboration is 0.54 and average number of authors per citation is 1.76.

Key words: Authorship pattern, Degree of Collaboration, Collaborative Research, Prabandhan: Indian Journal of Management, Multiple authorship

Introduction

Bibliometrics uses mathematical and statistical methods to analyse and measure the output of scientific publications. Modern bibliometrics has been largely inspired by Derek de Solla Price and the seminal work was carried out by him in the middle of the last century. Authorship pattern is an interesting and an important part of bibliometric study. Research publications are the embodiments of the intellectual thought contents expressed in published literature whose key

objective is to transmit innovative ideas or information to any specific field of knowledge towards the further development of a subject or a discipline.

Bibliometrics:

Pritchard (1969) defined the term 'Bibliometrics is the application of the mathematical methods to books and other media of communication'. Bibliometrics has commanded

the attention of numerous individuals in library and information science. The measurement of bibliographic information offers the promise of providing a theory that will resolve many practical problems. It is claimed that author productivity patterns, literature growth rates and related statistical distributions can be used to evaluate authors, assess disciplines and maintain collections.

Scope of the study

The present study attempts to measure the publication traits of a premier Indian referred journal namely 'Prabandhan: Indian Journal of Management' from 2008s to 2011. The study includes in its scope a cumulative total of 1328 journal citations appended at the end of all the published articles in all.

Objectives

The Main objectives of the present study are –

- To know the Authorship trend in Prabandhan: Indian Journal of Management,
- To test the Degree of collaboration in Prabandhan: Indian Journal of Management among the authors,
- To determine the proportion of Single Authored papers over Multi authored papers in Prabandhan: Indian Journal of Management, and
- To identify the average number of authors per citation.

Review of Literature

Authors are important in a system, which concentrates an information production, communication and consumption. They not only contribute to new scientific knowledge, but also influence many other aspects related to information production, dissemination and use. Collaborative research is produced by the effects

of intellectual sharing of two or more persons.

Studies related to authorship trend and collaborative research is considered an important facet of modern science. Balog (1979) has studied the authorship and author collaboration in Agricultural publications based on the papers published in 'Newzeland Journal of Agricultural Research' for the period 1958-78. During the above period single authored papers declined from 65.6% to 34.3%, two authored papers increased from 28.1% to 41.4% and three authored papers from 4.2% to 16.2%. Over the same period, the average number of authors per paper increased from 1.43 to 1.99. Shiridar (1985) has examined the authorship pattern among 'Indian Space Technologists' and found that 80% of the papers have two and more than two authors. Only 19% of the papers were single authored. Maheswarappa and Mathias (1987) analysed authorship and collaborative research in different disciplines of Applied Sciences based on the 'Indian Science Abstracts' for the years 1965, 1970, 1975, 1980 and 1983. An increasing trend towards collaboration was found in all the disciplines of Physical Sciences, but the actual increase differed from one discipline to another discipline. The average number of authors per paper had increased from 1.84 to 2.32.

Begum and Rajendra (1990) made a study of collaborative research in Zoological sciences in India based on Indian Science Abstracts. The study revealed that most of the papers (67.02%) were contributed by multiple authors. Munshi et al., (1993) studied 'Research Collaboration in Agricultural Sciences' by analyzing 9,500 papers published during the period 1982-86 by six Agricultural Universities in India. Multi-authored papers were more in number compared to single authored papers. Vimala and Pulla Reddy (1996) examined authorship and collaborative research by analyzing the citations cited in doctoral theses in Biology. The findings reveal that two authored

papers were maximum (40.39%). Single authored papers constituted 26.73% of the total cited papers. Three authored papers accounted for 20.98% and the rest 11.90% were contributed by four and more than four authors. Thus multi authored papers accounted for 73.27% of the total cited papers.

Krishna and Kumar (2004) studied authorship trends in Agricultural research. The study was based on 8,401 citations taken from 68 theses submitted for the award of doctoral degree to, Rajasthan University (RAU) during the period 1996-2000, the results indicates that multi authored contributions were accounting for 61%. Zafrunnisha and Pullareddy(2009) made a study on Indian Journal of Marketing and found that the Single authorship is high comared to Multiple authorship. Zafrunnisha and pullareddy(2009) conducted a study on Psychology doctoral theses their study revealed results that multi authored papers (52.87%) were high compared to single authored papers(47.12%), the average number of authors per citation was 1.67 and degree of collaboration was 0.53. Pallab Pradhan and others (2011) studied the authorship and degree of collaboration in Indian Chemistry literature, the results indicates that multi authored papers were high compared to single authored papers. the average number of authors per citation was 3.55, degree of collaboration was 0.03. Prashant (2011) analysed the authorship pattern was and found that the multi authored papers were accounted for 74.41%. of total journal citations.

Velmurugan (2013) studied the authorship pattern and degree of collaboration, the study revealed that 64.54 % of articles were contributed by joint authors. The degree of collaboration is 0.64. Vaishali Khaparde and Shubhangi Pawar(2013) in their study focused the trends in authorship pattern and author's collaborative research in Information Technology with a sample

of 17917 articles collected from LISA during 2000-2009. The average number of authors per article was 1.80 the degree of collaboration was 0.71. The study found that the researches in Information Technology were keep toward team research or group research rather than solo research. Goyal, Gupta and Kumar (2013) Outcome of the study shows that multi authored articles 97.24% prevailed the single authored articles 2.75%. The degree of collaboration in the field of chemical sciences was 0.97. Average number of authors per paper varies from 3.21-3.78. Kavita(2013) examined the articles published in the Indian journal of Nutrition and Dietetics for authorship pattern, degree of collaboration and geographical distribution of papers. The studies carried out for the paper found that majority of papers were multi-authored. The degree of collaboration was 0.95.

Materials and Methods

The present paper focuses on 'Prabandhan: Indian Journal of Management' as the source. All issues of the journal for the years 2009-2011 have been collected. The data was analyzed and tabulated for the purpose of interpretation and discussion. The present study is concerned with the analysis of journal citations appended in Prabandhan: Indian Journal of Management. The information relating to each journal citation i.e., number of authors, name of the journal, journal issue and volume number, publication year and page numbers of journal citation are recorded. The journal information regarding language, country and subject are obtained from 'Ulrich's International Periodicals Directory'. The data is fed into the MS-excel software for analysis.

Results and Discussions

The present study elucidates the authorship pattern, degree of collaboration and average number of authors per citation in journal

citations in Prabandhan: Indian Journal of Management.

Authorship pattern of Journal citations

Studying research collaborations has evolved into a major focus of bibliometrics and receives increasing attention from policy-makers and more general users. Modern research is regarded as increasingly complex and specialized,

making it impossible for an individual researcher to master all the knowledge and technical skills needed. In collaboration, different skills complement each other and this complementarity is hoped to stimulate knowledge sharing and the generation of innovation and new ideas. As a result, collaborative research activities not only enable the pooling and sharing of resources for enhanced efficiency but also link to the quality of the research outcome.

Table 1 Authorship pattern of Journal citations in Prabandhan: Indian Journal of Management

<i>Years</i>	<i>Single</i>	<i>Two</i>	<i>Three</i>	<i>More than three</i>	<i>Total Multi Authored</i>	<i>Total</i>
Till-1949	9(100%)	-	-	-	-	9(100%)
1950-1959	9(90%)	1(10%)	-	-	1(10%)	10(100%)
1960-1969	22(56.41%)	13(33.33%)	4(10.26%)		17(43.59%)	39(100%)
1970-1979	39(50%)	36(46.15%)	1(1.2%)	2(2.56%)	39(50%)	78(100%)
1980-1989	86(48.86%)	65(36.93%)	22(12.5%)	3(1.7%)	90(51.14%)	176(100%)
1990-1999	186(46.04%)	153(37.87%)	45(11.13%)	20(4.95%)	218(53.96%)	404(100%)
2000-2009	248(41.47%)	207(34.62%)	104(17.39%)	39(6.52%)	350(58.52)	598(100%)
2010-2011	7(50%)	4(28.57%)	1(7.14%)	2(14.28%)	7(50%)	14(100%)
Total	606(45.63%)	479(36.06%)	177(13.32%)	66(4.96%)	722(54.36%)	1328(100%)

It is obvious from the table 1 that the single authored papers are maximum with 45.63% of the total journal citations. Two authored papers contribute 36.06%, and three authored papers contribute 13.32% of the total number of papers cited. The remaining cited papers (4.96%) are contributed by more than three authors. Thus, multi-authored papers accounting for 54.36% of the

total cited papers. It is observed from Table 1 that the single authored papers have shown declining trend from 90% (1950-1959) to 41.47% (2000-2009). As a result of which, the multi-authored papers have increased from 10% to 58.52%.The single authored papers accounting for (45.63%) and multi authored papers accounting for more than 54.36% .

Single Vs Multiple authorship

Table 2. Single Vs Multiple authorship in Indian Journal of Management

Authorship	Journal Citations	Percentages
Single Authors	606	45.63
Multiple Authors	722	54.37
Total	1328	100

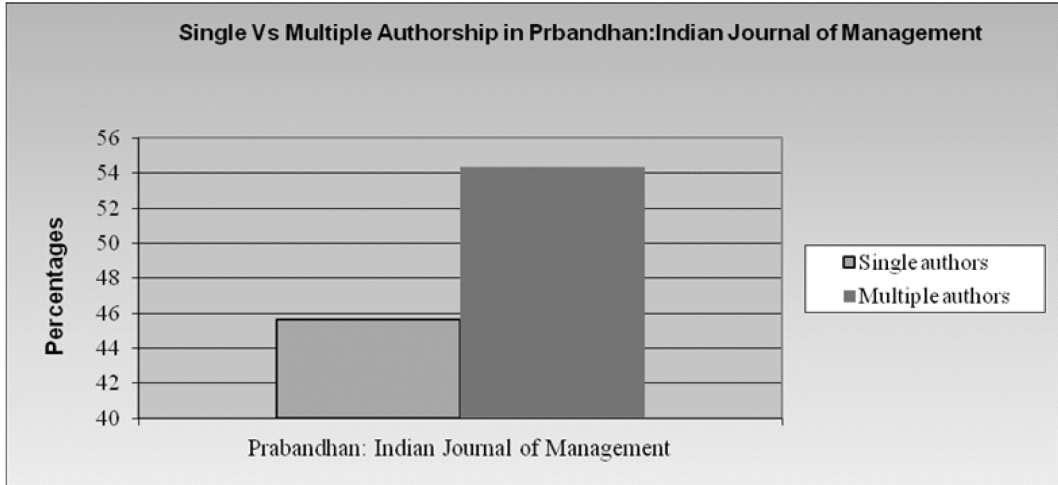


Figure 1. Single Vs Multiple Authorship in Prabandhan: Indian Journal of Management

Table 2 and figure 1 presents the predominance of multi-authored papers over single authored papers. The multi-authored papers accounting for more than 54% in Prabandhan: Indian Journal of Management.

Degree of Collaboration

Collaborative research is gaining popularity of late in respect of scientific publications. The degree of collaboration is computed using the following formula given by Subramanyam (1983).

The formula is $C = \frac{NM}{(NM+NS)}$

The extent of collaboration in research can be measured with the help of multi authored

papers using the formula given by Subramanyam.

The degree of Collaboration $DC = \frac{NM}{(NM+NS)}$

Where, C = degree of collaboration,

Nm = No. of multi authored papers in the discipline,

Ns = No. of single authored papers in the discipline.

The main aim of the degree of Collaboration is to know the different characteristics in the literature, to find out the research trend in the discipline and compare the trend in one discipline to another discipline and compare the trend in one discipline to another discipline and credit wait age to the authors etc.

Table 3. Degree of Collaboration in Prabandhan: Indian Journal of Management

<i>Years</i>	<i>Total No. of Citations</i>	<i>Authors</i>	<i>Average No. of Authors per citation</i>	<i>No. of Single Authored papers</i>	<i>No. of Multi-Authored papers</i>	<i>Degree of Collaboration</i>
Till -1949	9	9	1	9	0	0
1950-1959	10	11	1.1	9	1	0.1
1960-1969	39	60	1.53	22	17	0.43
1970-1979	78	121	1.55	39	39	0.5
1980-1989	176	292	1.65	86	90	0.51
1990-1999	404	702	1.73	186	218	0.54
2000-2009	598	1126	1.88	248	350	0.58
2010-2011	14	26	1.85	7	7	0.5
Total	1328	2347	1.76	606	722	0.54

It is observed from Table 3 that the degree of collaboration in Prabandhan: Indian Journal of Management has increased from the period 1960-1969 to 2000-2009. This indicates the trend towards collaborative research. The average number of authors per paper has increased from 1.1 (1950-1959) to 1.85 (2010-2011).

Findings

Analysis of journal citations in Prabandhan: Indian Journal of Management and in relation to the number of authors,

- The multi- authored papers are more in number (54.36%) and single authored papers are 45.63% of total journal citations,
- The number of collaborative papers indicates that the collaborative nature of research is growing,
- The average number of authors per article in Indian Journal of Management is 1.76,
- The degree of collaboration (calculated using the formula given by Subramanyam) in 0.54.

Conclusion

Bibliometric study is regarded as one of the crucial areas of research in the field of Library and Information Science. Moreover, bibliometrics study is used as an instrument in the collection building policy by providing the precise and much needed information to the managers to take the right decision in right time as to what documents they should select and what documents they should discard from the existing collections of their respective libraries. It is founded the study discussed the degree of author collaboration in Indian Journal of Management, multi author papers are increased in trend during the period of investigation. It can be concluded that the result of this type of studies would be appeared to be of great potential in the management of library journal collection.

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