

*Full Length Research*

# **Bibliometric Analysis with Special Reference to Vikalpa: The Journal for Decision makers for the year 1976-2013**

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The present study aims to investigate the bibliometric analysis of 885 articles appearing in the *Annals of Library and Information Studies* journal selected for a period of six years between 1976 and 2013. The highest number of contributions i.e., 168 articles (19%) have been published in Finance. It was found that most of the contributions are by one author i.e., 620 (59.96 %). It was also noted that out of 885 articles two authors contributed only 320 (30.95 %) articles while the rest 94 (9.09 %) articles were contributed by co- authors. The total average number of authors per paper is 1.17 and the average productivity per author is 0.86. The study reveals that journals are the most cited publication amongst the *Vikalpa: The Journal for Decision Makers*.

**Keywords:** Bibliometrics; Authorship Pattern; VIKALPA: The Journal for Decision Makers Publication Analysis - IIMA.

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## **INTRODUCTION**

Modern era is witnessing a proliferation of knowledge-knowledge in all disciplines. Scientific renaissance of the 16<sup>th</sup> and 17<sup>th</sup> centuries and the later advancements in Science and Technology have led to an enormous growth of literature, not only in Science & Technology but also in Social Sciences, Humanities, Arts etc. This all round expansion of knowledge and literature has resulted in what is called 'Information Explosion'. The Information Explosion has thrown a challenge to the researchers in the area of their specialization. Hence there is an

imperative need for the great mass of information to be systematically recorded and organized for prompt and expeditious dissemination to the researchers and subject experts

## **ABOUT JOURNAL**

VIKALPA: The Journal for Decision Makers is a quarterly publication of the Indian Institute of Management, Ahmadabad, India. Its objective is to disseminate

concepts of professional management and contribute to a better understanding of the context, resources, structures, systems, processes, and performance of organizations.

VIKALPA: The Journal for Decision Makers is a peer-reviewed journal.

VIKALPA welcomes original papers, from both academicians and practitioners, on management, business, and organization issues. Papers, based on theoretical or empirical research or experience, should illustrate the practical applicability and/or policy implications of the work described.

VIKALPA in Sanskrit carries a rich repository of meanings: Diversity, Alternatives, Logic, and Freedom of Choice. The journal seeks to reflect this range of meanings vis-à-vis management research, managerial problem solving, and decision-making. Its objective is to disseminate knowledge and good practice of professional management. By encouraging research and thinking, it attempts to contribute to a better understanding of management theories. Its focus is on applied research and reflections relevant to practicing managers and academicians. It lays special emphasis on management issues of emerging economies.

VIKALPA seeks a creative dialogue between management academicians and practitioners and aims at being essential reading for those scholars, policy makers, and those interested in growth, change, and innovation in developing societies. Every issue of the journal carries many features: perspectives, research, interfaces, colloquium, management case, case diagnosis, book reviews, and abstracts.

## ABOUT IIMA

IIMA has evolved from being India's premier Management Institute to a notable international school of management in just four decades. It all started with Dr. Vikram Sarabhai and a few spirited industrialists realizing that agriculture, education, health, transportation, population control, energy and public administration were vital elements in a growing society, and that it was necessary to efficiently manage these industries. The result was the creation of the Indian Institute of Management, Ahmadabad in 1961 as an autonomous body with the active collaboration of the Government of India, Government of Gujarat and the industrial sectors. It was evident that to have a vision was not enough. Effective governance and quality education were seen as critical aspects. From the very start the founders introduced the concept of faculty governance: all members of the faculty play an important role in

administering the diverse academic and non-academic activities of the Institute. The Institute had initial collaboration with Harvard Business School. This collaboration greatly influenced the Institute's approach to education. Gradually, it emerged as a confluence of the best of Eastern and Western values.

## RELATED STUDIES

Bibliometric analysis is employed by researchers to study the growth of literature in any given field. Pritchard (1969) defined the term Bibliometric as the application of statistical and mathematical methods to books and other communication. Bibliometrics has emerged as a thrust area of research, incorporating different branches of human knowledge. There are famous Laws of Bibliometrics i.e. Lotka's Law (1926) of Scientific Productivity, Bradford's Law (1934) of Scattering and Zips Law (1949) on Frequency of Words. But the Bibliometric studies started only in late sixties. Tiew (2000) found that 53% of journal articles contained self-citations and that there was a tendency for authors affiliated to the institution that published the journal to cite the journal. Aoki.M (2002) retrieved 4487 articles and analysed with the publication type "Practice Guideline" from MEDLINE. The results found that 108 articles were published in 1991 and 436 in 1992 for a 4-fold increase. 55.8% of articles were from the United States and 82% were in English. Verma, et al. (2007) deal with the analysis of 131 contributions of the journal entitled "Annals of Library and Information Studies during 1999-2005. The study shows that most of the articles are contributed by single author and that most of the contributors are from New Delhi. Citation analysis reveals that journals are the most cited publications amongst the library and information scientists and the source journal, i.e. Annals of Library and Information Studies, is the most cited journal. Sam (2008) presented the results of an analysis of articles published in the Ghana Library Journal from 2000 to 2006. The majority of the items cited were journals followed by books and reports. Only four of the top twenty-two journals cited frequently were of African origin, the rest were European or US-based. The most researched subject area was academic librarians. Thanuskodi S (2011) analysed the journal titled "Library Herald" for the period between 2006 and 2010. The analysis covered 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. It was found that all the studies point towards the merits and weakness of the journal which will be helpful for its further development. The result showed that out of 138 articles single author contributed 72 (52.17%) articles while the rest 66 (47.83%) articles were contributed by joint authors. The study revealed that most of the

**Table 1.** Category wise analysis and general lay – out of the periodical Vikalpa

SI.No	Categories	Year		Total	Percentage
		1976-1999	2000-2013		
1	Perspectives	60	66	126	12.2
2	Research	372	174	546	52.8
3	Interfaces	-	59	59	5.7
4	Notes and commentaries.	24	30	54	5.2
5	Colloquium	-	36	36	3.5
6	Conceptualization and learning's	-	10	10	1.0
7	Management case	61	57	118	11.4
8	Diagnoses (case analysis)	-	22	22	2.1
9	Book reviews	-	18	18	1.7
10	Abstracts	6	20	26	2.5
11	Bibliography	4	15	19	1.8
	Total	527	507	1034	100%

contributions are from India with 89.85 % and the rest 10.15 % only from foreign sources. Gupta, B M; Bala, A. and Kshitig, A (2013), analysed the global publications output in cataract research during 2002-11 on several parameters including contribution & citation impact of top 15 most productive countries, different types of cataract research, research output by different population age groups, subject-wise break-up of research output, relatedness of various diseases to cataract research, research contribution. The Scopus Citation Database had been used to retrieve the data for 10 years (2002-11) by searching the keywords “cataract” in the combined Title, Abstract and Keywords field. The world publication output in cataract research consisted of 27053 papers during 2002-11, which increased from 2025 papers in 2002 to 3080 papers in 2011, witnessing an annual average growth rate of 4.89%. The average citation impact per paper registered by world publications was 6.94 during 2002-11, which decreased from 7.82 during 2002-06 to 5.21 during 2007-11.

## OBJECTIVES OF THE STUDY

The following are the objectives of the study  
To analyze the contributions published in VIKALPA, during the period, 1976-2013 as to the

1. Distribution of articles in various categories;
2. Distribution of articles in various subject-areas to find out the areas which attract more attention from the contributors and the areas which show 'gaps';
3. To explore the trend of authorship;
4. To find out the productivity of authors contributing articles to VIKALPA, during 1976-2013;

## METHODOLOGY

Methods used in the research study is the bibliometric analysis, that has helped in research study of bibliographic content, features of the journal articles and citation analysis of each articles published in Vikalpa: The Journal for Decision Makers . The study year is observed from 1976-2013. This contains the research output for the period of 38 years and a collection of 885 articles. One hundred and fifty two issues of thirty eight volumes from 1976 to 2013 have been selected, for the study. For each article, year wise distribution of contributions, number of authorship, author's productivity and the single and multi-authored papers were noted down for the study. The data was collected from Vikalpa: The Journal for Decision Makers website [http://www.vikalpa.com/article/article\\_browse.php/](http://www.vikalpa.com/article/article_browse.php/) pertaining to the period from 1976 to 2013. The collected data is computed in the excel sheet were organized, calculated, tabulated, analyzed and presented by using simple arithmetic and statistical methods for its results.

## RESULTS AND DISCUSSION

The purpose of this chapter is to present the data in readable form so that it can be analyzed and interpreted. The methodology adopted in this study has been presented in the preceding chapter. The procedures for generating the data necessary for the study and the methods for presenting the data were explained.

Table 1 gives an overall view of the general lay out of the journal and the various categories published in VIKALPA. During the 38 years period under study VIKALPA has been publishing articles under different

**Table 2.** Distribution of contributions subject – area wise during 1976 - 2013

Sl.No	Articles	1976-1999	2000-2013	Total	Percentage
1.	General	0	12	12	1.3
2.	Accounting and Control	7	22	29	3.3
3.	Agriculture and Rural Development	45	8	53	6.0
4.	Communication	1	7	8	0.9
5.	Economics	46	17	63	7.1
6.	Finance	83	85	168	19.0
7.	Global Management	7	21	28	3.2
8.	Information Technology and Systems	21	23	44	5.0
9.	Innovation and Entrepreneurship	0	25	25	2.8
10.	Marketing	38	53	91	10.3
11.	Organizational Behavior and HRD	93	57	150	17.0
12.	Strategic Management and Leadership	74	60	134	15.1
13.	Public Systems	19	31	50	5.6
14.	Operations Management	21	9	30	3.4
	Total	455	430	885	100%
	Percentage	51.4%	48.6%	100%	
	Average of Articles per year	18.9	37.7		

categories. The journal has been publishing the contributions in 11 categories – Perspectives, Research, Interfaces, Notes and Commentaries, Colloquium, Conceptualization and Learning, Management case, Diagnoses, Book reviews, Abstracts, Bibliography. Colloquium on topics of importance and relevance, Case Analyses Diagnoses and Management cases are some of the interesting informative categories. Year wise distribution of contribution in categories which accommodate research articles on various aspects of Management. During the 38 years period of study 1034 articles have been published in different categories of these, the articles under research category total 546 i.e. (52.8%) followed by Perspectives 126 articles (12.2%) Management case 118 article (11.4%) Interfaces 59 articles (5.7%) Notes and Commentaries 54 articles (5.2%) Colloquium 36 (3.5%) Articles have appeared in all the categories for all the 38 years except Diagnoses, Book Reviews which appear only in 2009 to 2013 & Conceptualization and learning's only in 2006. The total number of articles in each year varies in the range of 25 to 35.

Table 2 presents the distribution of 885 articles in various areas of Management such as General, Accounting and Control, Agriculture and Rural Development, Communication, Economics, Finance, Global Management, Information Technology and Systems, Innovation and Entrepreneurship, Marketing, Organizational Behavior and HRD, Strategic Management and Leadership, Public Systems, Operations Management. Out of 885 articles, 168 articles

(19%) have been published in Finance, 150 articles (17%) in Organizational Behavior and HRD, 134 articles (15.1%) in Strategic Management Leadership, 91 Articles (10.3%) in Marketing, 63 articles (7.1%) in Economics, 53 articles (6%) in Agriculture and Rural Development, 50 articles (5.6%) in Public Systems, 44 articles (5%) in Information Technology and Systems, 30 articles (3.4%) in Operations Management, 29 articles (3.3%) & 28 (3.2%) in Accounting and Control & Global Management, 25 articles (2.8%) in Articles of General interest work out to just 12 articles (1.3%). Contributions in the subject area Communication are just 8 articles (0.9%).

An analysis of the contributions from the 1<sup>st</sup> volume in 1976 to 1999 and a comparison with that the period of study of 24 years 2000 to 2013 is attempted.

The journal started its publication in 1976 and has maintained uninterrupted publication till date. A total no. of 885 articles have been published in 38 years from 1976 – 2013. Number of articles published during 1976 – 1999 is 455 and the number of articles published during 2000 – 2013 is 430. Percentage of articles published in 24 years works out of 51.4 Percentage of articles published in 14 years is 48.6%. There is an increasing trend in the number of articles published during the 14 years period under study as compared to the 24 years period before 2000. It has increased from 18.9 articles per year and 37.7 articles per year.

Table 3 reveals the trend of authorship among the authors writing articles in VIKALPA overall out of 1034 articles 620 are single authored 320 are by 2 authors, 89 by 3 authors and 5 by 4 authors and above. It is of

**Table 3.** Distribution of contributions on the basis of authorship

Contribution Authored by	years		Total	Percentage
	1976-1999	2000-2013		
One	346	274	620	59.96
Two	150	170	320	30.95
Three	28	61	89	8.61
Four & Above Author	3	2	5	0.48
Total	527	507	1034	100%

**Table 4.** Productivity of authors

Authors contribution	No of article contributed	Percentage
Pradip K kandwala	15	0.98
Jayanth R Varma	14	0.92
Raghuram G	14	0.92
Manikutty S	11	0.72
Ramanarayan S	11	0.72
Raghunathan V	11	0.72
Samir K Barua	10	0.66
Ravindra H Dholakia	10	0.66
Pandey IM	10	0.66
Bahul H Dholakia	10	0.66
Anil K Gupta	9	0.59
Seshadri DVR	9	0.59
Piyush Kumar Sinha	8	0.53
Mukund R Dixit	8	0.53
Gupta MP	8	0.53
Sushil Vachani	7	0.46
Shridharan R	7	0.46
Sriram MS	7	0.46
Desai BM	7	0.46
Deepti Bhatnagar	6	0.39
Girja Sharan	6	0.39
Ramachandran K	6	0.39
Madhusudan Karmakar	6	0.39
Sampat P Singh	6	0.39
Shiva Kumar Srinivasan	6	0.39
Sidharth Sinha	6	0.39
Abhinandan Kumar Jain	5	0.33
Arindam Banerjee	5	0.33
Bhattacharyya S K	5	0.33
D M Pestonjee	5	0.33
Kanika T Bahl	5	0.33
Krishna Kumar	5	0.33

**Table 4.** Continues

L M Bhole	5	0.33
N R Sheth	5	0.33
N Ravichandran	5	0.33
N Venkiteswaran	5	0.33
Neharika Vohra	5	0.33
Ramesh Bhat	5	0.33
24 authors contributed	4	6.31
52 authors contributed	3	10.2
163 authors contributed	2	21.4
656 authors contributed	1	43.1
Total no of authors contributed	1522	100%

interest to note that single author articles are more than the number of co - authored articles. The percentage of single authored articles is 59.96% while the percentage of multi - authored articles is 40.04%. It can be inferred from the above that the trend is more towards single author articles than towards multiple authorship. This is in contrast to the fact regarding science disciplines where the trend is more towards collaborative research.

From Table 4 it is known that Pradip K kandwala has contributed maximum number of articles i.e 15 followed by Jayanth R Varma & Raghuram G each (14) articles, Manikutty S , Ramanarayan S and Raghunathan V (11) articles. The maximum contribution by an author is only 15. Only two authors have contributed 14 articles; Three authors have contributed 11 articles; Four authors have contributed 10 articles; Seven authors have contributed 6 articles; and twelve authors have contributed 5 articles each. Out of 1522 authors who have contributed articles to VIKALPA, 656 authors have contributed only one article constituting 43.1%. Authors who have contributed 326 articles 21.4%, 3, 4 articles 10.2%, 6.31% and so on. The above data on author productivity do not obey Lotka's law which is expressed mathematically as  $a_1/n^2$  where  $a_1$  is the number of authors contributing  $n$  papers;  $a_1$  is the no. of authors contributing 1 paper each.

## CONCLUSION

Based on the results of the above study the following suggestions are made: Since this study is limited to a period of six years only, a more comprehensive study starting from the first issue in 1976 till date may be undertaken so that a complete picture may be obtained. This will help in generalizing the trend of research in Management. All the Management Journals published from India may be subjected to bibliometric analysis and

a comparative analysis of the trend at National and International levels may be attempted. Bibliometric studies reveal the general communication pattern among the scholars in a particular field. Though Bibliometrics originated from Library and Information Science now it is widely used by researchers in many disciplines. It has proved to be an effective tool for Inter-disciplinary research.

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