

PUBLISHING TRENDS IN JOURNAL OF MANAGEMENT: A SCIENTOMETRIC STUDY

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ABSTRACT

The aim of this study was to explore the scientometric analysis of the 'Journal of Management' for a period of six years starting from 2006-2011. This journal is published by Sage publications with high impact factor. The study intended to examine the year-wise distribution of contributions, the pattern of authorship, degree of collaboration, relative growth rate, and doubling time. Analysis of the study showed the increasing and decreasing trend in research publishing. Degree of collaboration in the Journal of Management was high with value of 0.87. The Relative Growth Rate has increased from 0.72 to 1.68; and the Doubling Time decreased from 0.96 to 0.41.

KEYWORDS: Scientometrics, Relative Growth Rate, Doubling Time, Degree of Collaboration Authorship

INTRODUCTION

Journal of Management is a bimonthly, peer-reviewed journal and is committed to publish scholarly empirical and theoretical research articles that have high impact factor of 6.71. It is a Sage publication and official journal of Southern Management Association. Journal of Management encourages new ideas and perspectives on existing research. It covers domains such as business strategy and policy, entrepreneurship, human resource management, organizational behavior, organizational theory, and research methods. Journal of Management articles are regularly cited in the major business media, including The Wall Street Journal, The Huffington Post, Forbes, The Financial Times and The Washington Post. Journal of management is ranked 4 out of 185 in Management; 3 out of 115 in Business; and 1 out of 76 in Applied Psychology as per Journal Citation Report, Thomson Reuters, 2015.

The journal is indexed in Business ASAP – Gale, Business and Company Resource Center – Gale, EBSCO: Business Source, Emerald Management Reviews, Expanded Academic Index – Gale, LexisNexis, PAIS International, ProQuest: CSA Sociological Abstracts, ProQuest: International Bibliography of the Social Sciences (IBSS), PsycINFO, Scopus, Social SciSearch, Social Sciences Citation Index (Web of Science), Thomson Reuters: Current Contents - Physical, Chemical & Earth Sciences, VINITI Abstracts Journal, Wilson Business Periodicals Index/Wilson Business Abstracts.

LITERATURE REVIEW

Scientometric studies were done by different authors on different journal publications and literature on specific subject areas. A scientometric study on Indian Journal of Physics was made by Nattar, S.(2009) for 2004-2008 that showed highest percentage of contribution regarding single, two and three authors in the 2004 records. Another scientometric study was done by Srimurugan A. and Nattar, S.(2009) on D-LIB magazine published during 2006-2007 revealing the highest number of paper published in 2005 and the lowest in 2007. Vijay, K. R. and Raghavan, I. studied the Journal of Science

and Technology published during 2000-2004 and found that more than 93% of contributors were multiple authors.

Publishing trends of Indian Chemical Scientists during 1996-2000 was analyzed by Kannappanavar, B. U. Swamy, C and Vijay Kumar., (2004) and revealed that average number of authors per paper has increased from 7.52 to 8.39. Guan and Ma, (2007) studied the literature of China's Semiconductor and multiple authored papers recorded the higher value for co-authorship index. Scientometric study of Medical Journal of Malaysia was done by Sanni, S. A. and Zainab, A. N. (2010) for the years 2004-2008 and found that 4.82 percent of contributors were published by Malaysian authors with foreign collaboration.

Velmurugan, C.(2013) studied the journal- Annals of Library and Information Studies by exploring the publication of papers for six years 2007 to 2012. It was observed that the highest number of contributions 43 (21.19%) was in 2010 and most of them were double authored with 88 (43.35%) and the degree of collaboration was 0.64.

Bhaskaran, C.(2013) in his bibliometric study on Cryptography published during 2000-2011 observed the academic productivity and distribution of research diversity of the subject from four major countries- China, Japan, Taiwan and USA. The highest relative growth rate was 0.44 in 2002 and doubling time was 21.65 in 2008.

Another bibliometric analysis was done by Thanuskodi, S. (2011) for the "Library Herald" journal for a period of 2006-2010. The analysis included the number of articles, authorship pattern, year-wise distribution of journals cited, average number of references in each article. The study revealed that single authors contributed more than joint authors; also most contributions were from India and few from foreign countries.

In 2008, Yeoh, and Kaur analyzed the publication output in Higher Education for subject support in collection development. Altogether 40 issues of publications revealed a varied usage pattern of bibliographic references by the researchers and cumulative total citations was 8374.

OBJECTIVES

- To observe the year-wise distribution of articles
- To examine the pattern of authorship for a given period
- To identify the single and multi-authored contribution in the journal
- To study the authorship pattern in terms of Degree of Collaboration
- To find out the Relative Growth Rate (RGR) and Doubling Time (DT) of the subject and

METHODOLOGY

The data was collected from the website of the Journal of Management to study six volumes of thirty six issues in six years from 2006-2011. Every volume, issue and article was studied, with number of contributions, number of authorship, single and multi-authored papers, page distribution were noted. All the data were tabulated and analyzed by using statistical methods for its results.

ANALYSIS AND DISCUSSIONS

Distribution of Contributions (Volume-Wise)

Table 1: Distribution of Contribution (Year and Volume Wise)

Year	Vol. No	Issue No.	No. of Articles	Percentage
2006	32	6	38	12.70
2007	33	6	37	12.37
2008	34	6	42	14.04
2009	35	6	60	20.06
2010	36	6	59	19.73
2011	37	6	63	21.07
Total			299	100

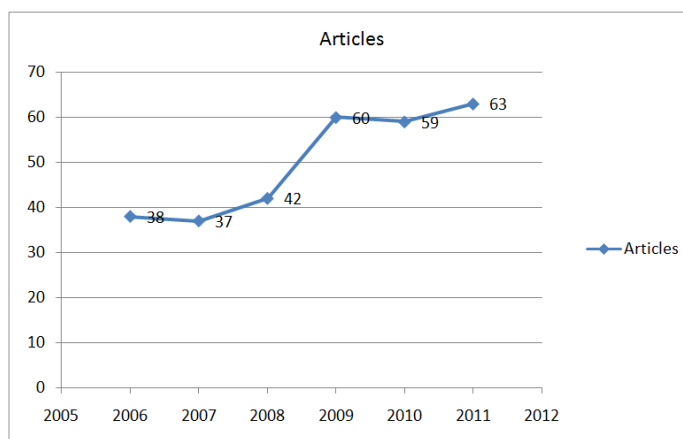


Figure 1: Number of Articles3

Table 1 and Figure 1 shows the total number of articles published from 2006-2011. The graph indicates that out of 299 contributors, the maximum number (63) is in 2011 showing 21%. The graph shows an increase in the contributions year by year.

Distribution of Contributions (Issue-Wise)

Table 2: Distribution of Contribution (Issue Wise)

Month	Vol.32	Vol.33	Vol.34	Vol.35	Vol.36	Vol.37	Total
Feb	7	5	8	7	12	12	51
Mar	6	5	6	12	8	11	48
June	7	8	8	8	10	10	51
Aug	5	6	6	11	10	11	49
Oct	5	5	7	8	8	11	44
Dec	8	8	7	14	11	8	56
Total	38	37	42	60	59	63	299

Table 2 indicates the distribution of issue-wise contributions. It exhibits that highest number of contributions were in December (56 issues) followed by 51 issues in February and June. The least publications were in the month of October with only 44 issues.

Authorship Pattern of Single and Joint Contributions

Table 3: Authorship Pattern- Single and Multiple Authors

Authorship	2006	2007	2008	2009	2010	2011	Total	Percent
Single	7	3	2	8	10	6	36	12
Joint	31	34	40	52	49	57	263	88
Total	38	37	42	60	59	63	299	100

Table 3 represents that out of 299 articles, single author contributed only 36 (12%) while therest 263 (88%) were contributed by joint authors.

Authorship Pattern with Degree of Collaboration

Table 4: Authorship Pattern with Degree of Collaboration

Year	Vol. No.	Single author	Multiple author	Total	Degree of collaboration
2006	32	7	31	38	0.81
2007	33	3	34	37	0.91
2008	34	2	40	42	0.95
2009	35	8	52	60	0.86
2010	36	10	49	59	0.83
2011	37	6	57	63	0.90
Total		36	263	299	0.87

Degree of Collaboration in the Journal of Management

To determine the strength of degree of collaboration (DC), the following formula was used where,

C = Degree of collaboration

N_m = Number of multiple authors

N_s = Number of single authors

$$C = \frac{N_m}{N_m + N_s}$$

In the present study, $C = \frac{263}{263+36}$ Therefore, $C = 0.87$

As a result the degree of collaboration in the Journal of Management is 0.87

Page Distribution

Table 5: Average Pages per Volume

Year	Vol. No.	Total pages	No. of contributors	Average
2006	32	1022	38	26.89
2007	33	1072	37	28.97
2008	34	1252	42	29.80
2009	35	1571	60	26.18
2010	36	1607	59	27.23
2011	37	1746	63	48.50
Total		8270	299	100

Table 5 shows page distribution from 2006-2011, Average pages per volume is 1378. Average page per issues is 229 and average page per contribution is 27.6.

Relative Growth and Doubling Time

Table 6: Relative Growth and Doubling Time

Year	Vol	No. of Issues	Total Output	Cumulative	RGR			Mean R(a)	DT	Mean DT
					W1	W2	R(a)			
2006	32	6	51		3.93			1.09	0.58	
2007	33	6	48	99	3.87	4.59	0.72			
2008	34	6	51	150	3.93	5.01	1.08			
2009	35	6	49	199	3.89	5.29	1.40			
2010	36	6	44	243	3.78	5.49	1.71			
2011	37	6	56	299	4.02	5.70	1.68			

Relative Growth Rate is the increase in the number of publications/pages per unit of time. In this study, one year is taken as one unit of time. The mean relative growth rate R, over a specific period of interval can be calculated from the following equation which was suggested by Mahapatra, M (1985).

$$R = W2-W1$$

Where,

R = Mean Relative Growth Rate over specific period of interval,

W1 = log W1 (Natural log of initial number of publications/pages)

W2 = log W2 (Natural log of initial number of publications/pages)

Therefore, R(a) = Relative Growth Rate per unit of publications per unit of time (year)

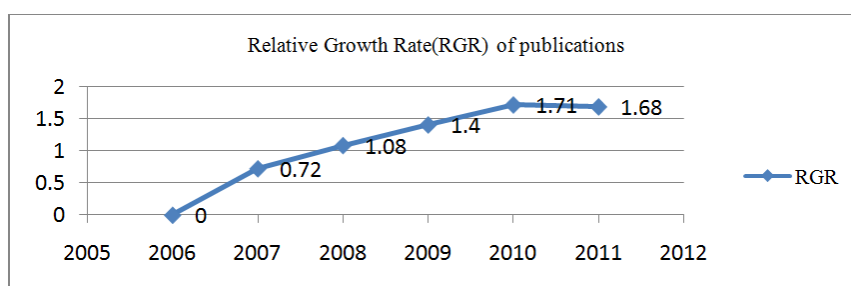


Figure 4: Relative Growth Rate (RGR) of Publications

Doubling Time

There is a direct relation between the Relative Growth Rate and Doubling Time. If the number of publications/pages of a subject doubles during a given period, then the difference between the logarithms of the numbers at the beginning and at the end of the period must be the logarithms of the number 2. This difference has a value of 0.693. Therefore, the doubling time for publication and pages can be calculated by the formula:

$$\text{Doubling Time (DT)} = \frac{0.693}{R}$$

Therefore, Doubling Time for publication: $DT(a) = \frac{0.693}{R(a)}$

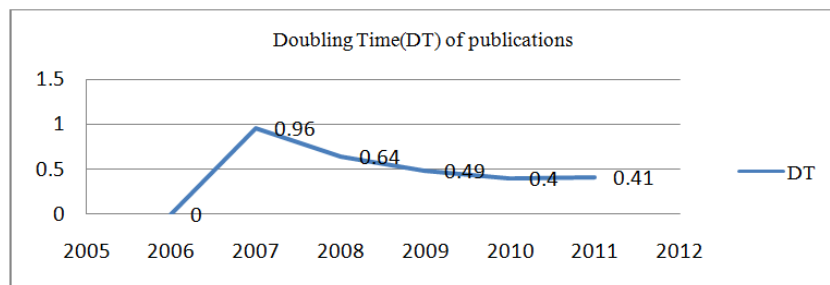


Figure 5: Doubling Time (DT) of Publications

Table 6 and Figure 4 and 5 indicates the publication growth based on Relative Growth Rate (RGR) and Doubling Time (DT) during the years from 2006-2011. Based on the study the relative growth rate (RGR) has increased from 0.72 to 1.68 during the years 2006 to 2011; and doubling time (DT) has decreased from 0.96 to 0.41.

CONCLUSIONS

Analysis of the study shows the increasing and decreasing trend in research publishing of Journal of Management. The highest number of contribution was in 2011 with 63 articles (21.07%) and the lowest being in 2007 with 37 articles (12.37%). When issue-wise distribution of contribution was studied, it was seen that the highest contribution was in the month of December in Volume 35. Study of authorship pattern showed that highest number (10) of single authors contributed in 2010 while multiple authors (57) contributed highest in 2011. Overall, out of 299 contributions, 263 (87%) were from joint authors, and 36(12%) were from single authors. Degree of collaboration in the Journal of Management was high with value of 0.87. The Relative Growth Rate has increased from 2006 (0.72) to 1.68 (2011); and the Doubling Time decreased from 0.96 (2006) to 0.41 (2011).

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