Are the Business Schools in India doing their 'Businesses? An Evaluation of IIM's Research Productivity Profile.

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Abstract

The study presents a detailed analysis of research productivity of the business management institutes of India during the period 1998-2012. The data used for the study were retrieved from the Scopus database. The results indicate that the publication productivity has steadily increased from only 44 records in 1998 to 186 records in 2012; 74.57% of contributions are multi-authored and among those joint authored, the two authored publications predominate; the Lotkas law is found almost applicable.The study also shows the existence of a good collaborative research environment prevailing in IIMs.

Keywords

IIM, Research Productivity, Authorship Pattern

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Introduction

Research productivity is an important element in the equation for excellence. Research productivity in academic institutions is reflected in the number and quality of articles published by the affiliated faculty. Productive faculty integrate their findings with those of other observations in order to further knowledge in their chosen field as well as bring current theory and practice into the classroom. In addition, through their research publications in the major journals, faculty members disseminate their research findings around the world. Such scholarly activity brings visibility and prestige to the authors and their affiliated institutions. The crucial importance of published research is universally recognized in the leading academic institutions, and this is evident in promotion and tenure decisions and salary determination (Niemi, 1987). With the emergence of the prestigious academic institutions in the business management education sector there is wide scope for the study which analyses their productivity in the research field. Erkut (2002) undertook a large-scale study of the Canadian business research landscape between 1990 and 1999, using the publication database of the Institute of Scientific Information[1]. Ram Mudambi et.al (2008) conducted a study to rank the publication productivity of 130 Asia Pacific business schools on data from the UTD Top 100 Business School Research Rankings[2] .

Research productivity of Indian business schools

In India higher education institutions are mushrooming in the field of business management offering degrees and post graduations in diverse subjects of the discipline. IIMs or Indian Institutes of management are considered as the elite academic institution in the field of business management education. There are 13 IIMs (table 1) at present which are established with the objective of providing quality management education that primarily offer postgraduate, doctoral and executive education programmes[3].Mudambi et.al (2008) reports the globalised trend of intensified competition among business schools, primarily through various rankings.With growth has also come an intensification in competition among the business institutes has set forth in maintaining the quality and excellence in education. For universities in general and business schools in particular, the pursuit of excellence increasingly involves benchmarking progress against regional and international competitors. Being recognized for excellence is

important, since both tuition and research funding is progressively being channeled to those institutions that can demonstrate that they rank among the best among their peers. The recent studies have identified that Indian Business schools still display pre-reforms mentality with its low research productivity profile (Kumar, 2011). According to the study by Professors Nirmalya Kumar and Phanish Puranam of the London Business School, the management research output in India is discouraging.[4] The results of the analysis of publications in 40 leading management journals by India-based faculty for the 20-year period of 1990-2009 reports that India's Management research output is very low, an average of 4 publications in the 40 top peer reviewed journals per year between 1990 and 2009. In this scenario of meagre research output of business schools an evaluation of the publication productivity of the leading business institutions in India seems mandatory.

Table 1 Overview of Indian Institutes of management(IIMs) in India

Name	Short Name	Year Established	City/Town	Website
Indian Institute of Management Ahmedabad	IIM-A	1961	Ahmedabad	iimahd.ernet.in
Indian Institute of Management Calcutta	IIM-C	1961	Kolkata	iimcal.ac.in
Indian Institute of Management Bangalore	IIM-B	1973	Bengaluru	iimb.ernet.in
Indian Institute of Management Lucknow	IIM-L	1984	Lucknow	iiml.ac.in
Indian Institute of Management Kozhikode	IIM-K	1996	Kozhikode	iimk.ac.in
Indian Institute of Management Indore	IIM-I	1996	Indore	iimidr.ac.in
Indian Institute of Management Shillong	IIM-S	2007	Shillong	iimshillong.in
Indian Institute of Management Raipur	IIM-Raipur	2010	Raipur	iimraipur.ac.in
Indian Institute of Management Rohtak	IIM-Rohtak	2010	Rohtak	iimrohtak.ac.in
Indian Institute of Management Ranchi	IIM-R	2010	Ranchi	iimranchi.ac.in
Indian Institute of Management Udaipur	IIM-U	2011	Udaipur	iimu.ac.in
Indian Institute of Management Tiruchirappalli	IIM-T	2011	Tiruchirappalli	iimtrichy.ac.in
Indian Institute of Management Kashipur	IIM-Kashipur	2011	Kashipur	iimkashipur.ac.in

Objectives of the study

The present study is aimed at examining the research productivity of Indian business schools with a particular focus to the Indian institutes of management on as a way of assessing the business research landscape during the period 1998-2012. Shedding light on this research question provides practical benefits for institutions by enabling administrators to better recruit, select, motivate, and develop productive faculty members.

Methodology of the study

The publication count is the simplest form of bibliometric indicator and the indicator that is most frequently used in research productivity evaluation. The present study is based on the bibliometric analysis of business management publications from publications from three pioneer Indian institutes of managements(IIMs)-IIM Ahmedabad ,IIM Bangalore and IIM Calcutta. The data is gathered on the scholarly contributions by academics of IIMs during the period 1998-2012, using the Scopus database maintained by Elsevier.

Findings and analysis

An attempt was made to analyze the amount of publications that has been published during 1998–2012. A total of 1467 unique records were retrieved after removing the duplicate entries.91.47% of the records were affiliated to IIM-A, 4.36% to IIM-B and 4.15% to IIM-C.

Year wise growth of publications

Fig 1 depicts the year wise growth of research output from 1998-2012. The pace of growth in business management publications is seen accelerating from only 44 records in 1998 to 186 records in 2012, but the growth cannot be considered as rewarding when the vast infrastructure and facilities available in the respective IIMs.

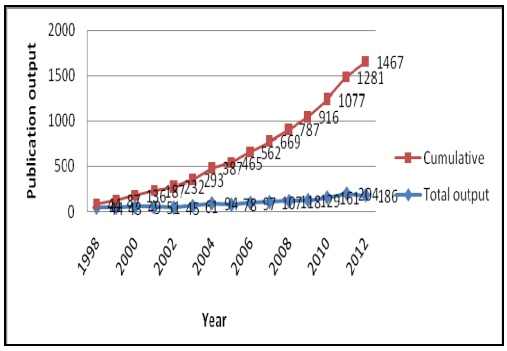

Fig 1Year wise growth of research output

The Relative Growth Rate and Doubling time of research output

The Relative Growth Rate [R(a)] and Doubling Time [Dt(a)]model by Mahapatra (1994) is applied to examine the growth rate of publication.[5] Table 2 shows the Relative Growth Rate and Doubling Time of publications. It can be noticed that Relative Growth Rate of publication increased from 0.71 in 1999 to 2.06 in 2012 and some fluctuations are observed in the years in-between(Fig 2). The mean Relative Growth for the block of five years (1998 to 2002) is 0.934 where as the corresponding value increased to 1.674 (2003-2007) and 1.932 (2008-2012).The Mean Doubling Time shows a decreasing trend from 0. 522(1998-2002) to0.417(2003-2007) and to 0.358 (2008-2012)

Table 2The Relative Growth Rate [R(a)] and Doubling Time [Dt(a)] of publications

Year	Total publication output	Cumulative	W_1	W_2	R(a)= W_2-W_1	Mean R(a)	Dt(a)=0.693/R(a)	Mean Dt(a)
1998	44	44	---	3.78	---		---	
1999	43	87	3.76	4.47	0.71		0.976	
2000	49	136	3.89	4.91	1.02	0.934	0.679	0.522
2001	51	187	3.93	5.23	1.3		0.533	
2002	45	232	3.81	5.45	1.64		0.422	
2003	61	293	4.11	5.68	1.57		0.441	
2004	94	387	4.54	5.96	1.42		0.488	
2005	78	465	4.36	6.14	1.78	1.674	0.389	0.417
2006	97	562	4.57	6.33	1.76		0.393	
2007	107	669	4.67	6.51	1.84		0.376	
2008	118	787	4.77	6.67	1.9		0.364	
2009	129	916	4.86	6.82	1.96		0.353	
2010	161	1077	5.08	6.98	1.9	1.932	0.364	0.358
2011	204	1281	5.32	7.16	1.84		0.376	
2012	186	1467	5.23	7.29	2.06		0.336	

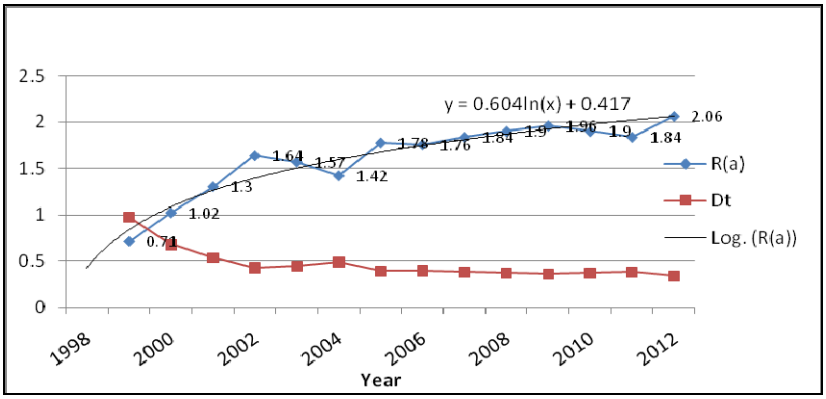

Fig 2 The Relative Growth Rate [R(a)] and Doubling Time [Dt(a)] of publications

Table 3 Distribution of authorship pattern

Number of authors	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total	%
1	14	14	22	13	19	10	16	17	28	28	27	33	42	48	42	373	25.43
2	18	18	20	26	13	21	34	32	41	37	46	42	53	70	71	542	36.95
3	7	8	6	7	9	16	20	17	16	20	22	26	44	48	47	313	21.34
4	4	3	1	5	4	3	11	5	6	15	15	17	13	22	13	137	9.34
5	--	--	--	--	--	8	10	4	2	1	5	5	2	7	10	54	3.68
6	--	--	--	--	--	2	1	2	2	3	1	2	4	2	1	20	1.36
7	--	--	--	--	--	--	--	--	--	1	--	1	--	1	--	3	0.2
8	--	--	--	--	--	--	--	--	--	--	1	1	1	--	--	3	0.2
9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0
>10	1	--	--	--	--	1	2	1	2	--	1	2	2	6	2	22	1.5
Total	44	43	49	51	45	61	94	78	97	107	118	129	161	204	186	1467	100
CI*	2.20	2.0	1.71	2.08	1.96	2.85	2.80	2.49	2.31	2.36	2.49	2.60	2.45	2.62	2.44	2.45	
CC**	0.4	0.39	0.3	0.42	0.34	0.53	0.59	0.47	0.42	0.46	0.46	0.47	0.46	0.47	0.47	0.45	
DC***	0.68	0.67	0.55	0.75	0.58	0.84	0.83	0.78	0.71	0.74	0.77	0.74	0.74	0.76	0.77	0.75	

* Collaboration Index ; **Collaboration co-efficient ; ***Degree of collaboration

Table 4 Distribution of authors by Lotka's law

No. of contribution, n	Observed no. of authors with 'n' publication,F	Observed percentage of authors	Expected no. of authors, P	Expected percentage of authors predicted by Lotka's	Difference (P-F)
1	477	100.00	477.00	100.00	0
2	119	24.95	119.25	25.00	+0.25
3	53	11.11	53	11.10	0
4	32	6.71	29.81	6.25	-2.19
5	17	3.56	19.08	4.00	-2.08
6	14	2.94	13.25	2.78	-0.75
7	6	1.26	9.73	2.04	+3.73
8	7	1.47	7.45	1.56	+0.45
9	3	0.63	5.88	1.23	+2.88
10	3	0.63	4.77	1.00	+1.77
More than 10	11				
Total	742				

Distribution of authorship pattern

Table 3 shows the various facets of authorship pattern of the contributions. The two-authored contributions ranks first in order sharing 36.95 percent of the total research output. The year wise analysis shows that the two authored papers has been increasing for the last three years from 2009-2012.The three authored papers follow second in order taking 21.34 percent of the total research contribution followed by four and five authored contributions sharing 9.34 percent and3.68 percent of the total research output during the study period

respectively. It is interesting to observe that 22 contributions (1.49%) are ten or more authored which points out to the existence of a good collaborative research environment prevailing in IIMs .

Collaboration trends of research productivity

Out of the 1467 contributions only 373 contributions (25.43%) are found to be with single authorship. The remaining 1094 contributions(74.57%)are multi-authored. This reveals fair collaboration among the field of business management research. The number of authors in collaborated papers ranges from two to more than ten authors. The scientific collaboration represents the quality of research work of co-researchers and the related research institutes. The extent of collaboration in research productivity of IIMs are analysed by using the indices. The collaboration index (CI) suggested by Lawani,(1980)[6], degree of collaboration(DC) by Subramanyam (1983)[7], and Collaboration co-efficient(CC) by Ajiferuke,(1988)[8] were calculated and presented in table 3.The three indices shows

highest value in 2003 and 2004.The degree of collaboration increases from 0.68 in 1998 to 0.77 in 2012 which indicates an increase in collaborative research.

Author productivity

A total of 1467 records of business management literature of IIMs were retrieved from Scopus during the period 1998-2012 have been authored by 742 authors. The ratio of the number of authors to contribution is about 0.50. It is very interesting to find that 477 authors (64.29%), published only one article.

Lotka's law has been used to measure the productivity of authors .Table 4 presents observed and expected number of authors with ten or less contributions. Table reveals that there is partial similarity between observed number and expected number of authors. So the Lotka's law is almost applicable in present study

Table 5 presents the ranking list of top 29 prolific(rank1-10) authors who made 7 or more contributions each as the first author. Mukerjee R. tops the list with16 contributions followed by Mandal S. and Saha D. With 15 contribution. Mukerjee R and Saha D. are affiliated to IIM – Calcutta. Among the top authors 9 were from the IIM-Ahmedabad, 7 from IIM-Calcutta and 5 from IIM-Bangalore.

Table 5 Rank list of top 10 authors

Sl.no.	Name	No. of contribution	Rank
1	Mukerjee R.	16	I
2	Mandal S.	15	1I
3	Saha D.	15	II
4	Lahiri S.	14	III
5	Garg A.	13	IV
6	Ali J.	12	V
7	Roy P.	12	V
8	Dass R.	11	VI
9	D'Cruz P.	11	VI
10	Singh S.	11	VI
11	Dutta A.	10	VII
12	Mavalankar D.	10	VII
13	Shukla P.R.	10	VII
14	Chang I.H.	9	VIII
15	Sen G.	9	VIII
16	Varman R.	9	VIII
17	Chakraborty S.	8	IX
18	De R.	8	IX
19	Mitra S.	8	IX
20	Naik G.	8	IX
21	Sadhukhan S.K.	8	IX
22	Sharma V.P.	8	IX
23	Singh R.	8	IX
24	Chanda R.	7	X
25	Ghosh D.	7	X
26	Ramani K.V.	7	X
27	Saranga H.	7	X
28	Shaw A.	7	X
29	Ueda T.	7	X

Suggestions and Conclusion

The scholarly activities and research productivity are used to measure the success of academic institutions. The institutions are gauged by their academic performance and research productivity of its faculties and scholars. The present study points out to a positive outlook of the research scenario prevailing in the pioneer IIMs of India. The collaborative trend is also evident from the predominance of multi-authored paper and a gradual increase in the value of collaboraitve indices. As the study is limited only on the productivity of only pioneer institutes, a comprehensive analysis of including other

institutes and also prominent business schools other than IIMs are recommended as follow up studies to obtain the complete picture of the research productivity of business management institutions. Despite the discouraging profile of research pointed out by the previous studies, the IIMs are now on the path of renovation but have to strive hard to cope with global competitors.

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