

INFORMATION PROFILE OF AN INDIAN BIBLIOMETRICIAN ; BIBLIOMETRIC STUDY OF DR. I. N. SENGUPTA'S PUBLICATIONS, 1969-92

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[Articles of Dr. I. N. Sengupta are quantitatively analysed. These articles were published in Indian and Foreign periodicals and some were presented in the national/international conferences. The citation pattern of citations received by the work of Dr. Sengupta by others covered in the Indian journals in the area of Library Science available in CBRI, NIH and University of Roorkee libraries are studied. The article analyses 102 publications of Dr. Sengupta covering the period of 1969-1992. Citations are observed from the articles on ranking of journals written by Dr. Sengupta himself and others, it is studied, if these authors have quoted Dr. Sengupta's work or not.

Paper suggests that Dr. Sengupta should have studied the wider aspect of bibliometrics rather than concentrating on biochemical/medical sciences only. It further suggests that Dr. Sengupta's articles published in foreign periodicals may bring interesting results if studied through Science Citation Index to study his pattern of citation profiles.]

0. INTRODUCTION :

An international Festschrift Committee had decided to publish a Festschrift volume in honour of Dr. I. N. Sengupta, an Information Scientist of an International repute, who extended the Bradford's Law of Scattering, on his 60th birth anniversary. To commemorate this occasion, a National Festschrift on Bibliometrics and Information Handling Conference was organised during 29-30 April 1991 at Indian Institute of Chemical Biology, Calcutta. Authors presented two papers in the area of bibliometrics. Dr. Sengupta's work was very much appreciated by the Indian as well as foreign authorities on bibliometrics and his achievements in the area of bibliometrics were highlighted.

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INFORMATION PROFILE OF AN INDIAN BIBLIOMETRICIAN

This prompted authors to study the information profile of Dr. Sengupta analytically. 102 publications including a book and two edited books are critically analysed in detail. Authors had already studied two individual information profiles in the areas of Plant Pathology and Cement Chemistry, a sub-field of building materials duly published in Annals of Library Science and Documentation so far. Two other individual studies have also been published in India, these were on Dr. S. Chandrasekhar, the noble laureate and on Prof. Bachawat of IICB, Calcutta. INSDOC, Delhi also studied the work of Dr. A. P. Mitra, the then DGSIR but the work was not been published officially.

Table 1 gives the yearwise breakup of 102 publications of Dr. I. N. Sengupta from 1969 to 1992.

The table show that Dr. Sengupta wrote 14 papers in 1988 followed by 12 and 11 papers in 1989 and 1985 respectively. So, 1988 may be considered as the peak period of his writing. In 1974 his 4 articles were published in foreign periodicals followed by 3 articles in 1989, 90 & 91.

Table also indicates that 53 articles were published in Indian periodicals and 28 articles in foreign periodicals. 18 papers were presented in the various conferences. Dr. Sengupta also wrote 1 book on Bibliometric research volume I and edited 2 other books.

Table 2 gives the break-up of publications under different categories of documents. It indicates that 51.9 per cent articles were published in Indian periodicals followed by 27.4 percent in foreign periodicals, IASLIC publications from 8.8 per cent followed by 11.9 per cent books, edited books and conference proceedings etc

1 METHODOLOGY FOR CITATION ANALYSIS

For studying the citation counts for 102 publications, Dr. Sengupta was requested to provide a list of his publications in 1991 and it was updated upto 1992 from Indian Journals of Information, Library and Society. Articles written by others and

published in the area of ranking of periodicals in Indian and foreign journals were also collected, references given at the end of each article was studied for those authors who have quoted Dr. Sengupta's work. This exercise was done for Indian articles as well as foreign articles. 69 volumes of various periodicals available in C. B. R. I., N. I. H. and University of Roorkee library were scanned for the purpose.

2. DATA ANALYSIS

The break-up of 102 publications including the preference of journals in which Dr. Sengupta published his work is given in Table 3 and life span and frequency of citation per article is tabulated in Table 4. Table 5 indicates the cited and citing documents listing.

Table 3 suggests that Dr Sengupta preferred to publish in Indian journal of Information Science (11 articles) followed by 10 articles published in IASLIC Bulletin. He also published 7 articles in Library Herald and 6 in Annals of Library Science & Documentation. It is suggested that these periodicals are core/important ones in the area of library science and their impact factors should be determined by INSDOC based on its formula.

Amongst the foreign periodicals he chose to publish 10 articles in Scientometrics and 9 articles in International Library Review. These two periodicals are considered as the pioneer one in the area of library science and bibliometrics. The Scientometrics specially covers the aspect of bibliometrics. The table indicates year and number of articles which are given within (a).

Table 4 indicates the life span and frequency of citation received per article. From the table it is evident that out of 102 articles only 13 articles received 51 citations out of which 45 citations were of Dr. Sengupta himself suggesting that only he has concentrated in the area of ranking of Indian journals. Only 6 citations were quoted by others. It leads to the fact that Dr. Sengupta chose a very narrow field of his study. The table

further shows that an article written in 1969 was quoted in 1973 and 2 times in 1974. This can be considered as the life span of the work because it was not cited after and that too only Dr. Sengupta cited his own work. Another article of 1970 was quoted four times, viz. 1973 (1) - 1974 (2) and 1981 (1). 1972 article of Sengupta was cited 9 times viz. 1973 (3), 1974 (3), 1980 (2) and 1984 (1). An article of 1973 attracted 9 citations out of which 6 were self-citations and three were quoted by others.

Table 5 details out cited and citing documents listing. It is interesting to observe that in 1969 IASLIC special publications attracted 7 citations ranging from year 1973 to 1981. Dr. Sengupta quoted his own work 5 times whereas 1 citation was quoted by others. UNESCO Library Bulletin article to 1970 attracted 7 citations ranging from 1971 to 1980 but all work self-citation. In 1971 an article published in International Library Review attracted 5 citations ranging from 1973 to 1974. All work self-citations. Another article in the same periodical attracted 9 citations between 1973 to 1984 and surprisingly all were self-citations. An article published in 1973 in Nature could only attract two citations during 1984 and 1985 that two was by Dr. Sengupta himself. An article published in Journal of Documentation in the year 1973 had 9 citations during 1973 to 1984 out of which 5 were self-citations and 4 were quoted by others. Two articles of 1974 published in International Library Review were quoted 6 times each during the period of 1974-85 and 1980-85 respectively and surprisingly all the 6 were self-citations. In 1974 an article published in Annals Library Science and Documentation was quoted in 1977 by another Author.

It is surprising to note that 10 articles published in SCIENTOMETRIC and only 1 article published in 1985 was quoted by Dr. Sengupta himself in 1985 itself.

3. CONCLUSION

From the study, it is concluded that Dr. Sengupta is an internationally known Bibliometrician but he has quoted his work profusely indicating that he has chosen a very narrow study field

of Bibliometric study. It might be possible that the citation pattern may become brighter if the article published in foreign periodicals are analysed through Science Citation Index/Social science Citation Index

It is also suggested that a survey similar to the one carried out in this study might be carried out for some other eminent library scientists like Dr, S. R. Ranganathan and Prof. P. N. Kaula.

The life span of an article could only be for limited period of 10 years, suggesting that further studies of the similar type might be taken to date on the area of the research field

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BREAK-UP OF PUBLICATIONS (YEARWISE)

S. No	Year	Indian Journals	Foreign Journals	papers in conf. Proc. & Other Special Publications	Books	Edited Books/Proceedings	Total
1.	1969	1		1			1
2.	1970		1	1			3
3.	1971		2	1			2
4.	1972		1				2
5.	1973		2				2
6.	1974	1	4				5
7.	1975	2					2
8.	1976			3			3
9.	1977	1		4			5
10.	1978	1					2
11.	1979	2	1				3
12.	1980	3	1	1			5
13.	1981	1					2
14.	1982	2					2
15.	1983	1					1
16.	1984	2	2				4
17.	1985	5	1	4		1	11
18.	1986	3	1				4
19.	1987		2				2
20.	1988	9		3			12
21.	1989	9	3				12
22.	1990	4	3				7
23.	1991	5	3				8
24.	1992	1					1
	Total	53	28	18	1	2	102

TABLE-2

BREAK-UP OF PUBLICATIONS UNDER DIFFERENT CATEGORIES OF DOCUMENTS

S. No.	Cateoories of Documents	Number of Publications	Percentage
1.	Indian Journals	53	51.9%
2.	Foreign Journals	28	27.4%
3.	IASLIC Special Publications	9	8.8%
4.	Proc. Med. Inf. Serv. British Counc.	1	1.0%
5.	Proc. Indo-U. S. Seminar	1	1.0%
6.	In Edited Books	7	6.9%
7.	Edited Books/Proceedings	2	2.0%
8.	Book	1	1.0%
	Total	102	100%

INDIAN JOURNALS				FOREIGN JOURNALS			
S. No.	Title (s) of Journal (s) Publication	No. of Pub.	Year (s) of Publication	S. No.	Title (s) of Journal (s)	No. of Pub.	Year (s) of Pub.
1.	Annals of Lib. Sc. & Doc.	6	74 (1) : 75 (2) : 77 (1) : 86 (1) : 89 (1)	1.	Int. Clasifict.	1	79 (1)
2.	Bull. Ind. Inst. Hist. Med.	1	85 (1)	2.	Int. Lib. Rev.	9	71 (2) : 72 (1) : 74 (3) : 84 (1) : 87 (1) : 90 (1)
3.	CLIS Observer	1	90 (1)	3.	Jour. Doc.	2	73 (1) : 74 (1)
4.	Herald Lib. Sc.	3	80 (1) : 88 (1) : 89 (1)	4.	Lib. Inf. Sci. Res.	1	87 (1)
5.	IASLIC Bull.	10	70 (1) : 78 (1) : 79 (2) : 80 (2) : 81 (1) : 85 (2) : 86 (1)	5.	Lib. Sc.	1	78 (1)
6.	ILA Bull.	2	88 (2)	6.	Libri	1	91 (1)
7.	Ind. J. Inf. Sc.	11	89 (3) : 90 (2) : 91 (5) : 92 (1)	7.	Medinfo	1	80 (1)
8.	Ind. Sci. Cruiser	2	83 (1) : 84 (1)	8.	Nature	1	73 (1)
9.	Ind. Sci. Cruiser	2	89 (1) : 90 (1)	9.	Scientometrics	10	84 (1) : 85 (1) : 86 (1) : 89 (3) : 90 (2) : 91 (2)
10.	Int. Infor. Commun. Educ.	6	82 (1) : 85 (1) : 88 (2) : 89 (2)	10.	Unesco Bull. Lib.	1	70 (1)
11.	Jaipur Univ. Lib. Bull.	1	89 (1)				
12.	Jour. Sci. Ind. Res.	1	88 (1)				
13.	Library Herald	7	82 (1) : 84 (1) : 85 (1) : 86 (1) : 88 (3)				
	Total	53					
							Total 28

TABLE-4
LIFE SPAN AND FREQUENCY OF CITATIONS FOR ARTICLE

Year of publication of cited Article	Analysis of No. of Articles	Number of citations Received		Year (s) of citations
		Self citations	Total Citations by others citations	
1969	1	3	3	1973 (1); 1974 (2)
1970	1	2	4	1973 (1); 1974 (2); 1981 (1)
1970	1	7	7	1971 (1); 1973 (2); 1974 (3)
1971	1	1	1	1980 (1)
1971	1	4	4	1974 (1)
1972	1	9	9	1973 (2); 1974 (2); 1974 (3); 1980 (2); 1984 (1)
1973	1	6	3	1973 (1); 1974 (1); 1975 (1); 1978 (1); 1980 (1); 1984 (1)
1973	1	2	2	1984 (1); 1985 (1)
1974	1	4	4	1974 (1); 1680 (1); 1984 (1); 1985 (1)
1974	1	3	3	1980 (1); 1984 (1); 1985 (1)
1974	1	3	3	1974 (1); 1984 (1); 1985 (1)
1974	1	1	1	1977 (1)
1985	1	1	1	1985 (1)
Total	13	45	6	51

TABLE-5
CITED AND CITING DOCUMENTS LISTING

Year of Publication	Cited/Source Document	Vol. No.	Pages	Year of Citation	Citing Author	Citing Document	Vol. No.	Pages
1	2	3	4	5	6	7	8	9
1969	IASLIC Spl. Pub.	12	100-107	1973	Sengupta, I. N.	Jour of Docum	29	192-210
				1974	Sengupta, I. N.	Prm. Lib. Sc. & Doc	21	095-111
				1974	Sengupta, I. N.	Int. Lib. Rev.	6	353-69
1970	IASLIC Bull	15	100-107	1973	Sengupta, I. N.	Jour of Docum.	20	39-57
				1974	Sengupta, I. N.	Arm. Lib. Sc. & Doc	21	55-67
				1974	Sengupta, I. N.	Int. Lib. Rev.	6	147-65
				1981	Rothore, R. S.	IASLIE Bull.	26	23-60
1970	UNESCO Bull Lib.	24	143-152	1971	Sengupta, I. N.	Int. Lib. Rev.	3	271-85
				1973	Sengupta, I. N.	Arm. Lib. Sc & Doc.	20	39-57
				1973	Sengupta, I. N.	Jour of Docum.	29	192-211
				1984	Sengupta, I. N.	Arm Lib. Sc. & Doc	21	95-111
				1974	Sengupta, I. N.	Int Lib. Rev.	6	167-65
				1974	Sengupta, I. N.	Int. Lib. Rev.	6	353-69
				1980	Sengupta, I. N.	IASLIC Bull	25	87-92
1971	Int. Lib. Rev.	3	171-185	1974	Sengupta, I. N.	Arm. Lib. & Doc.	21	95-111

Table-5 (contd.)

1	2	3	4	5	6	7	8	9
1971	Int. Lib. Rev. Pub.	3	271-95	1973	Sengupta, I. N.	Jour of Docum.	29	192-210
1974				1974	Sengupta, I. N.	P/m Lib Sc. & Doc	21	95-111
1974				1974	Sengupta, I. N.	Int. Lib. Rev.	6	353-69
1974				1974	Sengupta, I. N.	Int. Lib. Rev.	6	353-369
1972	Int. Lib. Rev.	4	169-195	1973	Sengupta, I. N.	Jour of Docum.	29	92-211
1973				1973	Sengupta, I. N.	Arm Lib. Sc. & Doc.	20	39-57
1973				1973	Sengupta, I. N.	Nature	244	75-76
1974				1974	Sengupta, I. N.	Arm. Lib. Sc. & Doc.	21	1-21
1974				1974	Sengupta, I. N.	Arm. Lib. Sc & Doc.	21	95-111
1980				1980	Sengupta, I. N.	Int. Lib. Rev.	6	353-369
1980				1980	Sengupta, I. N.	INSLIC Bull	25	87-92
1980				1980	Sengupta, I. N.	Herald of Lib. Sc.	19	312-318
1984				1984	Sengupta, I. N.	Int. Lib. Rev.	16	447-458
1984	Nature	244	75-76	1984	Sengupta, I. N.	Int. Lib. Rev.	16	447-458
1985				1985	Sengupta, I. N.	IASLIC Spc. Pub.	25	81-91
1973	Jour. of Docum	26	192-211	1973	Sengupta, I. N.	Arm. Lib. Sc & Doc.	20	39-57
1974				1974	Sengupta, I. N.	Arm. Lib. Sc. & Doc.	21	1-21
1974				1974	Sengupta, I. N.	Arm Lib. Sc. & Doc.	21	95-111
1974				1974	Sengupta, I. N.	Ph. D. Thesis State Univ. N. Y.	—	xi, 230
1974				1974	Sennupta, I. N.	Int Lib. Rev.	6	147-165
1975				1975	Subramanyam, K.	Ph. D. Thesis Univ. of Pittsburgh	—	viii-234
1978				1978	Malwad N. M.	Science Today	13	11
1980				1980	Sengupta, I. N.	Herald of Lib Sc.	19	312-318
1984				1984	Sengupta, I. N.	Int Lib. Rev.	16	447-458
1974	Int. Lib. Rev.	6	488-504	1980	Sengupta, I. N.	Herald of Lib. Sc.	19	312-318
1984				1984	Sengupta, I. N.	Int. Lib. Rev.	16	447-458
1985				1985	Sengupta, I. N.	IASLIC Spc. Pub.	25	81-91
1974	Int. Lib. Rev. Pub.	6	353-369	1974	Sengupta, I. N.	Arm. Lib. SC. & Doc.	21	1-21
1984				1984	Sengupta, I. N.	Int. Lib. Rev	16	447-458
1985				1985	Sengupta, I. N.	IASLIC Spl. Pub.	25	81-91
1974	Ann. Lib Sc & Doc.	21	39-57	1977	Bhatt, V. S.	Arm. Lib. SC. & Doc	24	114-118
1985	Scientome- trics	8		1985	Sengupta, I. N.	IASLIC Spc. Pub.	25	81-91