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Addendum

Bibliometrics and scientometrics in India: an overview of studies during 1995-2014

This is in response to the issues raised by some readers to our article entitled "Bibliometrics and Scientometrics in India: An overview of studies during 1995-2014 which appeared in *Annals of Library Information Studies*, Volume 64 (1) 28-36[1]. According to Research Gate, as of 12th August 2017, the article has been accessed by 732 readers among these 13 readers have given their comments. Three comments have expressed concern on the use of first author count besides the methodology, choice of journals included, identification of subjects, and the policy issues expressed in the studies. B.K. Sen also wrote a letter to the editor[2] expressing his concerns about the use of first author count. Taking all these into consideration, authors up dated the data on co-authors and their affiliations and in the process attempted to address the concerns expressed by readers.

All issues of the journals listed in Table 1 of the study[1] were examined manually from the websites and hard copies (where the soft version was not available). A database of the identified records was created into an MS Excel file. Articles written by prolific authors were updated using Google Scholar. To update the data, all articles indexed in *Social Science Citation Index (SSCI)* from India were downloaded for the period 1995-2014. From these, authors identified records that dealt with scientometrics and bibliometrics. However, articles published in the international journal *Scientometrics* were not included as the same was scanned earlier. The data so obtained was appended to the existing database. It may be essential to add here that *Current Science* is indexed by SSCI and the view of a reader that *Current Science* being a multidisciplinary journal should have not been included. If we do not include *Current Science*, a number of papers related to bibliometrics and scientometrics published by Indian scholars would have been left out.

Citations to all new records were updated using Google Scholar. After reviewing, references provided by a reader have also been added to the data. The subject of the study dealt in the article was identified from the title or abstracts of the papers like HIV/AIDS research in India. It clearly indicates that it is a paper on HIV/AIDS and the country studied is India. This will be clear after the reader goes through Part II of the study. The study does not include papers presented at conferences or book chapters or papers written in language other than English.

It was reported earlier that out of 801 articles, 783 (97.7%) articles were published in journals listed in Table 1 of that article and the rest 18 (2.3%) in other journals[1]. Distribution of 18 articles in other journals was reported as *Information Processing and Management (IPM)* - 3 articles, *Journal of the American Society for Information Science and Technology (JASIST)*, *Journal of Intellectual Property Rights (JIPR), Research Evaluation (RES EV), and World Patent Information (WPI)* - 2 each, *Health Information and Libraries Journals (HLTH), Indian Journal of Chemistry (IJC), Informetrics (INF), Journal of Chemical Information and Computer Science (JCICS), Journal of Information Science (JINF), Lung India (LUNG) and Neurology India (NEUR)* - one each.

The revised data of the distribution of articles by journals indicate that of the 902 articles, 847 (93.9%) are in journals listed in Table 1 of the article[1] and 18 in other journals mentioned above. Remaining 37 articles are scattered in *JASIST, Technological Forecasting and Social Change and ASLIB Proceedings* each 5, *Library High Tech News and JIPR* each *3, Journal of Documentation and Library and Information Science Research* each 2. *Rest 12 articles were scattered in Bangladesh Journal of*

Library and Information Science, CLIS Observer, Journal of Vector Borne Diseases, Journal of Library and Information Science, LIBRI, Separation and Purification, Serials Review, Science Technology and Society, University News, Vidyasagar University Journal of Library and Information Science, Acta Tropica and Asian Journal of Psychiatry each 1. Authors are of the view that bibliometric researchers may overlook bibliometrics/scientometrics papers in some of the journals above as some of them are neither library and information science nor multidisciplinary journals.

Based on the updated data, Table 1.1 provides the distribution of output by different performing sectors along with their proportion of papers not cited based on total count of papers. Like the data reported in our study[1] based on first author count, it also indicates that the share of output of academic institutions is highest followed by the output of CSIR. However, the share of all performing sectors based on total count is less than that reported in our study[1] except for Department of Atomic Energy (DAE) and medical colleges. The overall share of papers not cited has also declined; however, the share of papers not cited has gone up for Council of Scientific and Industrial Research and Department of Atomic Energy.

Table 1.2 presents the distribution of output on updated data by prolific institutions along with the citations these papers received and the values of Citation per Paper (CPP) and Relative Citation Impact (RCI). It indicates that the total number of institutions has gone up from 16 to 24. Thus, eight new institutions have been added to the list. It also indicates that the ranking of only four top institutions remains unchanged and the ranking of rest has either gone up or gone down. Arrows marked against each indicate the change. A glance at Table 1.2 indicates that only three institutes namely Karnataka University, Dharwar, Annamalai University, Chidambaram, and Government Medical College and Hospital, Chandigarh has gone up in ranking and the ranking of the remaining institutes have gone down. A slight increase has been observed in Citation per Paper (CPP). It has increased from 9.9 to 10.7 which is because of the addition of three new highly cited papers. The papers are:

1. Karki M.M.S., Patent citation analysis: A policy analysis tool, *World Patent Information*, 19(4) 1997, 269-272, Number of citations 333
2. Arunachalam S., Gunasekaran, S., Diabetes research in India and China today: from literature based mapping to health care policy, *Current Science,* 82 (9) 2002, 1086-1097, Number of citations 87
3. Meyer M., Bhattacharyya, S., Commonalities and differences between scholarly and technical communication, *Scientometrics* 61(3) 2004, Number of citations 95

Table 1.3 lists 29 most prolific authors who contributed 12 or more papers along the values of CPP and RCI for each author. It indicates that the

Table 1.1—Distribution of output by performing sectors

	Performing sectors	TNP (%)	PNC (%TNP)
1	Academic Institutions (Indian)	668 (34.8)↓	196 (29.3)↓
2	Academic Institutions (Foreign)	67 (3.5)	21 (31.3)
3	Council of Scientific and Industrial Research (CSIR)	530 (27.6)↓	64 (12.1)↑
4	Department of Atomic Energy (DAE)	216 (11.3)↑	26 (12.0)↑
5	Indian Council of Agricultural Research + State Agricultural Universities (ICAR+ SAUs)	75 (3.9)↓	10 (13.4)↓
6	Indian Institutes of Technology (IITs +ENGC)	80 (4.2)↓	18 (22.5)***
7	Medical colleges	49 (2.6)↑	7 (14.3)↓
8	*Other institutions	105 (5.5)↓	20 (19.0)↓
9	**Others	113 (5.9)↑	33 (27.9)↓
10	US Government + US Private institutions	17 (0.9)	NIL
	Total	1920	392 (20.6)↓

***** Under different scientific agencies and ministries of the Government of India, **Include individual authors, NGOs and Private institutions. *** indicates no change

Table 1.2—Most prolific institutions and impact of their output

Sl. no.	Institutions	P (%)	C (%)	CPP	RCI
1	CSIR-NISTADS, New Delhi	351 (18.3)	4891 (23.7)	13.9	1.3
2	BARC, Mumbai	199 (10.4)	3164 (15.4)	15.9	1.5
3	CSIR-NISCAIR, New Delhi	95 (4.9)	1348 (6.5)	14.2	1.3
4	Karnataka University, Dharwad	60 (3.1)	404 (1.9)	6.8	0.6
5	Mysore University, Mysore ↑(up from 8 to 5)	35 (1.8)	232 (1.1)	6.6	0.6
6	Annamalai University, Chidambaram ↑ (up from 9 to 6)	32 (1.7)	208 (1.0)	6.5	0.6
7	*University of Madras, Chennai	30 (1.5)	270 (1.3)	9.0	0.8
8	*National Physical Laboratory, New Delhi	27 (1.4)	298 (1.4)	11.0	1.0
9	*University of Malaya, Kaula Lumpur	27 (1.4)	109 (0.5)	4.0	0.4
10	Government Medical College and Hospital, Chandigarh ↑ (up from 12 to 10)	27 (1.4)	171 (0.8)	6.4	0.6
11	*University of Delhi, Delhi	26 (1.4)	46 (0.2)	1.8	0.1
12	University of Kerala, Trivandrum ↓ (down from 5 to 12)	24 (1.3)	92 (0.4)	3.8	0.3
13	KUVEMPU University, Shimoga ↓ (down from 6 to 13)	24 (1.3)	103 (0.5)	4.3	0.4
14	*Indian Institute of Technology, New Delhi	23 (1.2)	978 (4.7)	42.5	3.9
15	University of Burdwan, Burdwan ↓ (Down from 10 to 15)	22 (1.1)	198 (0.9)	9.4	0.8
16	DRTC, Bangalore ↓ (down from 11 to 16)	19 (1.0)	196 (0.9)	10.3	0.9
17	M S Swaminathan Foundation, Chennai ↓ (down from 7 to 17)	17 (0.9)	661 (3.2)	38.9	3.6
18	*Jawaharlal Nehru University, New Delhi	14 (0.7)	60 (0.3)	4.3	0.4
19	*DESIDOC, Delhi	13 (0.7)	129 (0.6)	9.9	0.9
20	Manonmaniam Sundaranar University, Tirunelveli ↓ (down from 13 to 20)	12 (0.6)	20 (0.1)	1.7	0.2
21	Shrivenkateshwara University. Meerut ↓ (down from 14 to 21)	12 (0.6)	57 (0.3)	4.7	0.5
22	Banaras Hindu university, Banaras ↓ (down from 15 to 22)	12 (0.6)	74 (0.4)	6.2	0.7
23	IGNOU, New Delhi ↓ (down from 16 to 23)	12 (0.6)	118 (0.6)	9.8	1.0
24	*Alagappa University, Karaikudi	12 (0.6)	42 (0.2)	3.5	0.4
	Total including other institutions	1920	20612	10.7	1.00

*New additions to the list and the listing are based on total number of papers (TNP).

Table 1.3—Most prolific authors and impact of their output

Sl. no.	Authors	TNP (%)	TNC (%)	CPP	RCI
1	Gupta, B.M. (NISTADS)	121 (6.3)	1301 (6.3)	10.7	1.00
2	Garg, K.C. (NISTADS)	52 (2.7)	799 (3.9)	15.4	1.4
3	*Sen B K (University of Mallaya +Individual author with no official affiliation)	51 (2.7)	400 (1.9)	8.0	0.7

Contd—

Table 1.3—Most prolific authors and impact of their output

Contd

4	Kumar, S. (NISTADS)↑ (Moved up from 10 to 4)	48 (2.5)	527 (2.6)	10.9	1.0
5	Kademani, B. S. (BARC)↓ (Moved down from 4 to 5)	42 (2.2)	740 (3.6)	17.6	1.6
6	Prathap, G. (NISCAIR) ↓ (Moved down from 3 to 6)	30 (1.5)	372 (1.8)	12.4	1.2
7	*Kumar V (BARC)	30 (1.5)	493 (2.4)	16.4	1.6
8	*Kalyane V L (BARC)	28 (1.5)	786 (3.8)	28.1	2.5
9	Bhattacharya, S. (NISTADS) ↓ (Moved down from 5 to 9)	23 (1.2)	595 (2.9)	25.9	2.4
10	*Dhawan S M	21 (1.1)	254 (1.2)	12.1	1.1
11	Sangam, S.L. (Mysore Univ.) ↓ (Moved down from 6 to 11)	18 (0.9)	119 (0.6)	6.6	0.7
12	Rao, I.K.R. (DRTC) (No change)	18 (0.9)	196 (0.9)	10.9	1.0
13	*Sagar A (BARC)	18 (0.9)	316 (1.5)	17.6	1.7
14	*Surwase G (BARC)	16 (0.8)	174 (0.8)	10.9	1.0
15	Arunachalam, S. (MSSF) ↓ (Moved down from 7 to 15)	16 (0.8)	518 (2.5)	32.4	3.1
16	Dutta, B. (Vidyasagar university) ↓ (Moved down from 13 to 16)	14 (0.7)	26 (0.1)	1.8	0.2
17	*Dutt, B. (NISTADS)	14 (0.7)	184 (0.9)	13.1	1.3
18	Basu Aparna (NISTADS) ↓ (Moved down from 8 to 18)	13 (0.7)	220 (1.1)	16.9	1.6
19	Sudhier, K. G. (Univ. of Kerala) ↓ (Moved down from 9 to 19)	13 (0.7)	58 (0.3)	4.4	0.4
20	Gupta Ritu (ShriVenkateshwara University), Meerut, ↓ (Moved down from 11 to 20)	13 (0.7)	64 (0.3)	4.9	0.4
21	*Bala Adarsh (Government Med Coll. & Hosp)	12 (0.6)	77 (0.4)	6.4	0.7
22	*Kumar, A. (BARC)	12 (0.6)	209 (1.0)	17.4	1.7
23	*Mohan, L. (BARC)	12 (0.6)	149 (0.7)	12.4	1.2
24	*Karisiddappa, C.R. (Karnatak University	11 (0.6)	199 (0.9)	18.1	1.6
25	*Bandyopadyay, A. K. (Burdwan University)	11 (0.6)	115 (0.6)	10.4	1.0
26	*Bhanumurthy, K. (BARC)	10 (0.5)	40 (0.2)	4.0	0.4
27	*Das, A. K. (JNU)	10 (0.5)	23 (0.1)	2.3	0.2
28	*Kaur, H.(Government Med Coll. & Hosp)	10 (0.5)	105 (0.5)	10.5	1.0
29	*Kumbar BD (Karnatak University)	10 (0.5)	46 (0.2)	4.6	0.4
	Total including other authors	1920	20612	10.7	1.0

*New additions to the list and the listing is based on total number of papers (TNP)

total number of authors has gone up from 13 to 29. Thus, 16 new authors have been added to the list of prolific authors. It also indicates that the rankings of only two top authors remain unchanged and the ranking of rest has gone down except Kumar S (CSIR-NISTADS) which has gone up from 10 to 4. Arrows marked against each indicate the change.

The complete count of papers has added new institutions and authors to the existing list of authors and institutions. There was a suggestion on using existing studies in policy making, it is not possible for me to comment on that as it needs an in-depth analyses of the studies. However, it can be pointed out that several of these studies are result either of PhD or

M Phil dissertations carried out by several authors in different universities on the topics of bibliometrics and scientometrics[3].

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