# A Comparative Study of the Bibliometric Characteristics of COLLNET Journal of Scientometrics and Information Management and Journal of Scientometric Research

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#### **ABSTRACT**

The study compared the bibliometric parameters of scholarly communications published in COLLNET Journal of Scientometrics & Information Management (CJSIM) and Journal of Scientometric Research (JSR) from 2012 to 2021. Different bibliometric parameters examined in the study are pattern of output during 2012 to 2021, identification of most prolific countries and their citation impact in terms of Citation Per Paper (CPP), i-10 index and Papers not Cited (PnC). Study also identified prolific institutions and authors and their citation impact besides examining pattern of citation. The study also examined the pattern of domestic and international collaboration. Findings of the study indicate that the pattern of output is inconsistent in both the journals. The output is scattered among 39 countries in CJSIM and 50 countries in JSR. India followed by Iran contributed the highest number of papers in both the journals. Most of the prolific institutions and authors were from India in both the journals. More number of papers remained uncited in CJSIM as compared to JSR. More number of papers were published in domestic collaboration in JSR as compared to CJSIM. However, papers published in international collaboration in both the journals was almost equal. Among all the countries, China published the highest number of papers in international collaboration in CJSIM, but no such trend was observed in JSR.

**Keywords:** Bibliometric comparison, Collnet Journal of Scientometrics and Information Management, Journal of Scientometric Research, Bibliometric indicators, Citation analysis, Pattern of collaboration.

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#### INTRODUCTION

Primary journals are an important source of new knowledge in a discipline or a sub-discipline. These are the most valuable source of primary communication for researchers, scientists, and academicians. Primary periodical literature of any discipline reflects the issues of importance to a field of study. The quantum of research in a country can be judged through its publications in primary journals. Analysis of scholarly publications using bibliometric techniques helps in understanding the trends of growth in a discipline. India publishes a large number of periodicals in the discipline of Library and Information Science (LIS). However, no LIS journal published from India could make it to Science Citation Index Expanded (SCIE) of the Web of Science, an international citation database owned by Clarivate

DESIDOC Journal of Library and Information Technology, Journal of Scientometric Research and COLLNET Journal of Scientometrics and Information Management. Among these four journals, except COLLNET Journal of Scientometrics and Information Management (CJSIM) all are also indexed by Scopus, a leading citation database published by Elsevier. In 2023, all these journals received 'Impact Factor®' for 2022 given by Journal Citation Reports (JCR) of Clarivate analytics, a product based on Web of Science database. Authors have chosen these two journals for comparison because both these journals dealt with the same discipline of bibliometrics and scientometrics and have a good track record of publishing academic articles. The first issue of JSR was published in the last quarter (September-December) of 2012, though CJSIM started publishing in 2007. To keep the study period equal for both journals, the authors have chosen the period from 2012 to 2021. The details of both the journals can be seen at https://www

Analytics (USA). However, four journals published from India

are now indexed by Emerging Sources Citation Index of the Web

of Science. These are Annals of Library and Information Studies,





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.tandfonline.com/loi/tsim20 for CJSIM and at https://jscires.org/

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for JSR. Readers can also refer a bibliometric analysis of papers published in *Collnet Journal of Scientometrics and Information Management* by Garg and Bebi<sup>[1]</sup> and Giri and Das<sup>[2]</sup> for a bibliometric analysis of the *Journal of Scientometric Research*.

#### **REVIEW OF LITERATURE**

Bibliometric study of a single journal is primarily intended to create a portrait of the journal that exhibits its productivity, maturity, impact and its ability in diffusing the knowledge in the specific field it portrays. In the last two decades several individual journals in the disciplines of LIS have been the focus of bibliometric studies. However, only a few studies related to bibliometric studies for two or more journals have been published in the literature. Readers can see bibliometric studies related to individual journals by Dutt, Garg and Bali<sup>[3]</sup> for papers published in the international journal Scientometrics from 1978 to 2001, Mukherjee<sup>[4]</sup> for Journal of the American Society for Information Science and Technology (JASIST) from 2000 to 2007, Garg, Lamba and Singh<sup>[5]</sup> for DESIDOC Journal of Library and Information Technology (DJLIT) from 1992 to 2019, Garg and Singh<sup>[6]</sup> for the journal Library and Information Science Research from 1994 to 2020, Gaviria-Marin, Merigo, and Popa<sup>[7]</sup> for papers published from 1997 to 2016 in the Journal of Knowledge Management, Abdi et al.[8] for papers published in Information Processing & Management, Garg, Kumar and Geeta[9] and Velmurugan and Radhakrishnan<sup>[10]</sup> for Malaysian Journal of Library and Information Science from 2007 to 2018 and 2008-2014 respectively, and Naseer et al.[11] for papers published from 2012 to 2016 in Journal of Informetrics respectively. The two journals under study has also been subjected to bibliometric analysis. Recently Giri and Das<sup>[2]</sup> made an analysis of papers published in volume 1 (2012) to volume 11 (2022) of the Journal of Scientometric Research. Authors provided a comprehensive picture at the development and evolution of the journal by utilizing bibliometric techniques and visualizing software. According to authors, the journal within a decade of its origin has attracted considerable interests of the global research community. Also, publication of leading-edge research in special issues on important thematic areas have paved the way for engaging a diverse pool of researchers within the journal. However, the study have some limitations like the methodology used for counting of records. Also, some terms used in the study have not been explained. The study is silent of the citation impact of output of authors, institutions and countries, which is an important aspect for bibliometric studies.

Studies comparing two or more journals with one another are by Garg and Bebi.<sup>[12]</sup> Authors compared the number of articles published in *Annals of Library and Information Studies (ALIS) and DESIDOC Journal of Library and Information Technology (DJLIT)* for papers published from 2010 to 2013 and the citations obtained by these articles from 2010 to 2014 (April) using Google Scholar. Findings revealed that "both the journals are more or

less on equal footing in terms of citations per paper as well as impact factor. However, DJLIT had better immediacy index than ALIS". Verma and Brahma[13] compared SRELS Journal of Information Management and DESIDOC Journal of Library and Information Technology in terms of distribution of articles, authorship pattern of articles, geographical distribution of articles, and major contributors to the two journals. The study revealed that "SRELS published more articles than DJLIT. SRELS published less number of foreign authored papers than DJLIT. DJLIT cited more number of references as compared to SRELS". Vazquez, Ardanuy, Lopez-Borrull and Olle et al.[14] compared Anales de Documentación (AD) and BiD textos universitaris en Biblioteconomia i Documentació (BID), two journals published from Spain, for papers published between 2000 and 2013. The study focused on the "number of articles and authors, and the contents and thematic study of articles published to determine the level of similarity between the contents of two journals, the subject areas they belong to and whether there is any subject continuity during the period analysed". The thematic study found that there is little similarity between the content of the two publications; the study found that BID is practitioner-focused unlike AD, which gave preference for academic content. Slutsky and Aytac<sup>[15]</sup> compared Issues in Science and Technology Librarianship (ISTL) and Science and Technology Libraries (STL) for papers published from 2005 to 2014. The study analysed a total of 338 research articles; 163 from STL and 175 from ISTL. The study found that bibliometrics and citation analysis is the top topic in STL while library resources is the most common topic in ISTL. Journal articles and web resources were the most common formats cited in both journals. The University of Arkansas is the number one institution with authors publishing in STL while Indiana University topped the list in ISTL. Furthermore, data from Scopus (2008-2015) showed that the total number of citations, Source Normalized Impact per Paper (SNIP), Impact per Publication (IPP) and SCImago journal rank were higher for STL. Maity and Bhattacharyya Sahu<sup>[16]</sup> made a bibliometric study of papers published from 2005 to 2015 in five journals published by Emerald group of publications. These five journals included in the study were Journal of Enterprise Information Management (JEIM), Journal of Intellectual Capital (JIC), Online Information Review (OIR), Performance Measurement and Metrics (PMM) and Journal of Information, Communication and Ethics in Society (JICES). The study found that single-authored papers are predominant followed by two authored papers in all the five journals. Authors from UK contributed maximum numbers of papers and most papers have been contributed by Brunel University, UK followed by University of Hawaii, USA. The average article length mostly ranged from 16-20 pages in three journals except PMM and JICES where it ranged from 11-15 pages. A six-authored paper in JEIM received most citations followed by a single authored paper in the JIC. The review of the literature indicates that no study has been reported

in literature which compared different bibliometric parameters of CJSIM with JSR. Hence the authors undertook the present study.

#### **OBJECTIVES OF THE STUDY**

The basic aim of the present study is to compare different bibliometric parameters of the COLLNET Journal of Scientometrics and Information Management (CJSIM) and the Journal of Scientometric Research (JSR) for the scholarly communications published in these two journals from 2012 to 2021 (10 years). A comparative study specifically of the scientific output and its impact in terms of citations received by the published articles in these two journals will be examined for the above-mentioned period. Bibliometric characteristics examined in the study for the two journals are type of documents published, pattern of output from 2012 to 2021, identification of prolific countries, institutions & authors and their citation impact in terms of Citation Per Paper (CPP), i-10 index, and papers not cited (PnC), to examine the pattern of citation and identification of highly cited papers for the two journals, and pattern of domestic and international collaboration of published papers.

#### **METHODOLOGY**

Authors downloaded the data from the Websites of the two journals available at https://www.tandfonline.com/loi/tsim2 0 for CJSIM and https://jscires.org/past-issues/ for JSR. Data was downloaded for ten years from 2012 to 2021. MS Excel software was used for downloading and analysis of the data. Downloaded data consisted name of all the authors along with their affiliation(s), year of publication of the paper; and citations received by each paper. Google Scholar was used to obtain the citation data from January 16, 2024 to February 5, 2024. Title of the paper was pasted in the search box of Google Scholar and the number of citations as reflected in the search results was recorded in the MS Excel data sheet. Data was analysed to examine the pattern of growth of articles published from 2012 to 2021, the most prolific countries, institutions, authors and the impact of their output. The impact of the papers was examined using Citation Per Paper (CPP), i-10 index and Papers not Cited (PnC%). Authors also examined the citation pattern of output and identified highly cited papers as well as pattern of domestic and international collaboration of papers published in the two journals. Authors have used the method of complete count for analysis of publications output and the citations received by them. This method is different from the first author count where only the first author gets the credit for publication of a paper. In the complete count method, each country or institution or author in multi-authored papers are given unit credit for their contributions which inflates the number of contributions and citations. In the initial study citations for papers published were examined till May 30, 2023. In the revised version, citations have been updated from January 16, 2024 to February 5, 2024.

#### **RESULTS AND DISCUSSION**

In the following paragraphs, authors of the study discuss the results of the analysis on different bibliometric aspects mentioned under the objectives of the study.

#### Type of documents published in the two journals

An analysis of records published in the two journals indicates that Journal of Scientometric Research (JSR) and COLLNET Journal of Scientometrics and Information Management (CJSIM) published 276 and 236 records respectively from 2012 to 2021 excluding book reviews, editorial and others as these have not been included in the final analysis as these attract a very insignificant number of citations. Further analysis of data indicates that the number of research and review articles published in the two journals was almost equal. However, JSR also published other type of documents (Table 1) which were not published by CJSIM. Of the 11 editorials published in JSR, four were related to special issues published in the years 2019 (papers related to machine learning in scientometrics), 2020 (papers presented at Fourth International Conference and IndiaLICS International Training Workshop held in New Delhi in 2017and 2021), and 2021 (papers in first issue dealt with Science, Technology and Innovation in Latin America and the papers in second special issue dealt with Science, Technology, Innovation and Development in Africa).

Table 1: Type of documents published in the two journals.

Journal of Scientometric Research		COLLNET Journal of Scientometrics and Information Management
Type of documents	Total	Total
*Research articles	226	230
Research note	17	-
Perspective papers	10	-
Research in progress	8	-
Commentary	6	-
Review articles	4	6
Scientific correspondence	2	-
Webliography	2	-
Total	276	236
Book Reviews	55	-
**Editorials	11	5
***Others	5	****10
Grand total	346	241

\*Include articles published as invited articles and articles in special issues, \*\*Include editorials of special issues also, \*\*\*Included details about board members, affiliation and support system and issue highlights in the inaugural issue, one conference report and one acknowledgement, \*\*\*\*Included announcements and report on international conferences on Webometrics, Informetrics and Scientometrics and Homage to Eugene Garfield.

## Pattern of publication output from 2012 to 2021 in CJSIM and JSR

The pattern of output for papers published in CJSIM and JSR from 2012 to 2021 have been depicted graphically in Figure 1 below. During the period of 10 years, the CJSIM published 236 records as articles and reviews. Thus, it published 23.6 articles per year. The number of records published in CJSIM was less than average number of records published in the years 2013, 2016 and 2018. JSR published 276 records as research articles, reviews, research note, perspective papers, and research in progress, commentary, scientific correspondence, and Webliography (for details see Table 1). Thus, JSR contributed 27.6 records per year. The number of records published in JSR was less than average number of



Figure 1: Pattern of output in CJSIM and JSR from 2012 to 2021.

records per year in all years except 2020 and 2021. The pattern of growth of papers published during the study period indicates an inconsistent pattern of output of papers published in both the journals. JSR published special issues in the years 2020 and 2021 resulting in a steep increase in the number of publications during these two years. Possible reason for less number of papers published in the year 2012 in JSR might be because it was the year when the journal was launched.

# **Prolific countries and impact of their output** *CJSIM*

Table 2A presents the output data and its impact in terms of CPP, i-10 index and PnC for prolific countries. Based on the complete count of articles, it is observed that 39 countries including India contributed 582 articles. Table 2A lists 15 prolific countries that contributed 10 or more papers. These 15 prolific countries contributed 500 (85.9%) papers and the share of remaining 24 non-prolific countries is 82 (14.1%) of the total output. Of these 24 non-prolific countries, seven countries produced one paper only and the output of the remaining 17 countries varied in the range of two to nine papers. Of the 15 prolific countries listed in Table 2A, more than one-quarter (31.3%) papers were contributed by Indian authors followed by contributions from Iran (12.5%) and China (9.5%). Thus, these three prolific countries (India, Iran and China) together contributed more than half (53.3%) of the total output. The share of output for the remaining 12 prolific countries

Table 2A: Distribution and impa	ct of output for most	t prolific countries for CJSIM.
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#	Country	TP (%)	TC (%)	СРР	i-10 index (% of TP)	PnC (% of TP)
1.	India	182 (31.3)	1717 (37.2)	9.4	59 (32.4)	13 (7.1)
2.	Iran	73 (12.5)	561 (12.1)	7.7	18 (24.7)	8 (11.0)
3.	China	55 (9.5)	299 (6.5)	5.4	6 (10.9)	7 (12.7)
4.	Germany	25 (4.3)	257 (5.6)	10.3	8 (32.0)	4 (16.0)
5.	Taiwan	25 (4.3)	171 (3.7)	6.8	4 (16.0)	1 (4.0)
6.	Brazil	19 (3.3)	142 (3.1)	7.5	6 (31.6)	11 (57.9)
7.	Korea	18 (3.1)	105 (2.3)	5.8	4 (22.2)	5 (27.8)
8.	Russia	17 (2.9)	128 (2.8)	7.5	8 (47.1)	3 (17.6)
9.	Saudi Arabia	17 (2.9)	164 (3.5)	9.6	8 (47.1)	0 (0.00)
10.	Canada	13 (2.2)	80 (1.7)	6.2	1 (7.7)	0 (0.00)
11.	Indonesia	12 (2.1)	110 (2.4)	9.2	7 (58.3)	5 (41.7)
12.	Turkey	12 (2.1)	81 (1.8)	6.8	5 (41.7)	4 (33.3)
13.	France	11 (1.9)	24 (0.5)	2.2	0 (0.0)	8 (72.7)
14.	Slovenia	11 (1.9)	89 (1.9)	8.1	3 (27.3)	0 (0.00)
15.	Nigeria	10 (1.7)	72 (1.6)	7.2	3 (30.0)	0 (0.00)
	Sub-total	500 (85.9)	4000 (86.6)	8.0	140 (28.0)	69 (13.8)
	Other 24 countries	82 (14.1)	621 (13.4)	7.6	28 (34.1)	20 (24.4)
Total		582 (100.0)	4621 (100.0)	7.9	168 (28.9)	89 (15.3)

listed in Table 2A is about 32.6% and their share of output ranged between 1.7 to 4.3 percent for different countries. The pattern of output indicates a skewed distribution of output as 24 non prolific countries contributed 82 papers only. These findings are similar to the pattern of output in DJLIT as has been reported by Garg, Lamba and Singh. However, the findings of the present study are different from the bibliometric study of Garg and Bebi<sup>[11]</sup> for CJSIM for the period 2007-2019, where Belgium and USA were found to be among the most prolific countries with high CPP.

However, these two countries could not find place in the list of prolific countries in the present study.

The impact of the output of these prolific countries has been examined using Citation Per Paper (CPP), i-10 index and proportion of Papers not Cited (PnC%). The value of CPP for the global output is 7.9. Among all the countries listed in Table 2A, CPP is higher than the global CPP for India, Germany, Saudi Arabia, Indonesia, and Slovenia. For the remaining countries, CPP is lower than the global value of CPP. Among all the countries CPP was the highest (10.3) for Germany followed by

Table 2B: Distribution of output and impact of output for most prolific countries for JSR.

#	Country	TP (%)	TC (%)	CPP	i-10 index (% of TP)	PnC (% of TP)
1.	India	282 (42.9)	1953 (41.1)	6.9	64 (22.7)	30 (10.6)
2.	Iran	60 (9.1)	307 (6.5)	5.1	16 (26.7)	11 (18.3)
3.	Brazil	31 (4.7)	288 (6.1)	9.3	9 (29.0)	0 (0.0)
4.	China	24 (3.7)	100 (2.1)	4.2	2 (8.3)	5 (20.8)
5.	The Netherlands	20 (3.0)	136 (2.9)	6.8	1 (5.0)	1 (5.0)
6.	Turkey	18 (2.7)	442 (9.3)	24.6	4 (22.2)	0 (0.0)
7.	USA	18 (2.7)	91 (1.9)	5.1	2 (11.1)	0 (0.0)
8.	Saudi Arabia	16 (2.4)	74 (1.6)	4.6	1 (6.3)	1 (6.3)
9.	UK	14 (2.1)	75 (1.6)	5.4	2 (14.3)	0 (0.0)
10.	Mexico	12 (1.8)	93 (2.0)	7.8	5 (41.7)	0 (0.0)
11.	Malaysia	11 (1.7)	273 (5.7)	24.8	7 (63.6)	0 (0.0)
12.	Romania	10 (1.5)	26 (0.5)	2.6	0 (0.0)	0 (0.0)
	Sub-total	516 (78.7)	3858 (81.2)	7.5	113 (21.9)	48 (9.3)
	Other 38 countries	140 (21.3)	894 (18.8)	6.4	29(20.7)	14(10.0)
Total		656 (100.0)	4752 (100.0)	7.2	142 (21.6)	62 (9.5)

Table 3A: Prolific institutions and the impact of their output for CJSIM.

#	Institute	TP (%)	TC (%)	CPP	i-10 index (% of TP)	PnC (% of TP)
1.	Dalian University of Technology, China	26 (4.5)	93 (2.0)	3.6	2 (7.7)	6 (23.1)
2.	Asia University, Taiwan	20 (3.4)	156 (3.4)	7.8	4 (20.0)	0 (0.00)
3.	CSIR-NIScPR, India	15 (2.6)	114 (2.5)	7.6	3 (20.0)	0 (0.00)
4.	PES University, India	14 (2.4)	87 (1.9)	6.2	5 (35.7)	2 (14.3)
5.	Shahid Chamran University, Iran	13 (2.2)	217 (4.7)	16.7	6 (46.2)	0 (0.00)
6.	KISTI, Korea	11 (1.9)	73 (1.6)	6.6	4 (36.4)	4 (36.4)
7.	University of Delhi, India	11 (1.9)	74 (1.6)	6.7	3 (27.3)	3 (27.3)
8.	Concordia University, Canada	10 (1.7)	62 (1.3)	6.2	0 (0.0)	0 (0.0)
9.	Karnataka University, India	10 (1.7)	112 (2.4)	11.2	6 (60.0)	0 (0.0)
	Sub-total	130 (22.3)	988 (21.4)	7.6	33 (25.4)	15 (11.5)
	Other 230 institutions	452 (77.7)	3633 (78.6)	8.0	133 (29.4)	73 (16.2)
Total		582 (100.0)	4621 (100.0)	7.9	166 (28.5)	88 (15.1)
CSIR-NI	ScPR: National Institute of Science Communication and	Policy Research, KISTI: Kor	ea Institute of Science and Tech	nnology Inforr	nation, Korea.	

Table 3B: Prolific institutions and the impact of their output for JSR.

#	Institute	TP (%)	TC (%)	СРР	i-10 index (% of TP)	PnC (% of TP)
1.	Jawaharlal Nehru University, New Delhi	31 (4.7)	288 (6.1)	9.3	9 (29.0)	2 (6.5)
2.	CSIR-NIScPR, New Delhi	29 (4.4)	195 (4.1)	6.7	9 (31.0)	4 (13.8)
3.	PES University, India	17 (2.6)	85 (1.8)	5.0	0 (0.0)	2 (11.8)
4.	Dalian University of Technology, China	15 (2.3)	23 (0.5)	1.5	0 (0.0)	5 (33.3)
5.	Banaras Hindu University, India	14 (2.1)	157 (3.3)	11.2	5 (35.7)	0 (0.00)
6.	BARC (Mumbai)	14 (2.1)	101 (2.1)	7.2	6 (42.9)	0 (0.00)
7.	IABF University, Saudi Arabia	10 (1.5)	34 (0.7)	3.4	0 (0.0)	1(10.0)
8.	South Asian University, New Delhi	10 (1.5)	76 (1.6)	7.6	0 (0.0)	0 (0.00)
	Sub-total	140 (21.3)	959 (20.2)	6.9	29 (20.7)	14 (10.0)
	Other 290 institutions	516 (78.7)	3793 (79.8)	7.4	110 (21.3)	49 (9.5)
Total instituti	ons	656 (100.0)	4752 (100.0)	7.2	139 (21.2)	63 (9.6)

CSIR-NIScPR: National Institute of Science Communication and Policy Research, PES: People's Education Society, BARC: Bhabha Atomic Research Centre, IABF University: Imam Abdulrahman Bin Faisal University.

Saudi Arabia and India. France has the lowest CPP among all the 15 prolific countries. Authors explored the reasons for the low CPP for France using i-10 index and PnC%. Data presented in Table 2A for the values of i-10 index and PnC% indicates that France had low CPP because, about 72% papers published by France remained uncited and no paper was found to be cited ten or more times. Of the total papers published by prolific countries, 140 (28%) papers were cited 10 or more times. In terms of an absolute number of papers, highest share of papers that received 10 or more citations were for India (59) followed by Iran (18). However, in terms of the proportion of total papers, i-10 index was highest for Indonesia and Turkey. Of the total papers contributed by prolific countries, 69 (13.8%) papers remained uncited. Highest share of uncited papers (72.7%) was for France followed by Indonesia (41.7%). For Saudi Arabia, Canada, Slovenia and Nigeria no paper remained uncited, i.e. all papers published by these four countries were cited.

#### **JSR**

Table 2B depicts the distribution of publication output and the impact of papers published in the journal for 12 prolific countries which contributed 10 or more papers during the study period of 2012 to 2021. Based on the complete count of articles, it is observed that 50 countries including India contributed 656 articles. The contribution of the 12 prolific countries is 516, slightly more than three-fourths (78.7%) of the total output and the share of remaining 38 countries contributing less than 10 papers is 21.3% of the total output. Of these 38 countries, nine countries produced one paper only and the output of the remaining 29 countries varied in the range of two to nine papers. Of the 12

prolific countries listed in Table 2B, more than 40% papers were contributed by Indian authors, followed by contributions from Iran and Brazil. Thus, these three prolific countries (India, Iran and Brazil) together contributed more than half (56.6%) of the total output.

The impact of the output of the 12 prolific countries has been examined using CPP, i-10 index and proportion of papers not cited (PnC%). The value of CPP for the global output is 7.2. Among all the countries listed in Table 2B, the value of CPP is higher than the global CPP for Malaysia, Turkey, Brazil, and Mexico in that order. For the remaining eight countries, the value of CPP is lower than the global value of CPP. The value of CPP among all the countries was highest (24.8) for Malaysia closely followed by Turkey. The lowest value of CPP was for Romania followed by China. Of the 516 papers published by prolific countries, 113 (21.9) papers were cited 10 or more times and the remaining 403 (78.1%) papers were cited less than 10 times. Among the 12 prolific countries, highest share of papers that received 10 or more citations were for India (64) followed by Iran with 16 papers. Of the total papers contributed by prolific countries, 48 (9.3%) papers remained uncited. Highest share of uncited papers (22.8%) was for China. For the Netherlands and Saudi Arabia only one paper each remained uncited and for Brazil, Turkey, USA, Mexico, Malaysia, Romania and the UK no paper remained uncited. Authors explored the reasons for low CPP for Romania and China using i-10 index and PnC%. Data presented in Table 2B for values of i-10 index and PnC% indicates that Romania and China had low CPP because, no paper published by Romania was cited 10 or more times and in case of China only two papers were cited ten or more times.

# **Prolific Institutions and the Impact of their Output** *CJSIM*

Table 3A presents the output data and its impact in terms of CPP, i-10 index and PnC for nine prolific institutions. Two hundred thirty-nine institutions located in India and abroad contributed

582 publications. Thus, on an average 2.5 paper was contributed by each institute. Of the 239 institutions, 62 institutions were located in different states of India and the remaining 177 institutions were located in other 38 countries scattered in different parts of the globe. Table 3A lists nine prolific institutions that contributed 10 or more papers along with their citations and other different

Table 4A: Most prolific authors and impact of their output for CJSIM.

#	Author	Institution	TP (%)	TC (%)	СРР
1.	Ho, Yuh-Shan	Asia University, Taiwan	12 (2.1)	104 (2.3)	8.7
2.	Bornmann, Lutz	Max Planck Society (H. Qtrs.), Germany	7 (1.2)	67 (1.4)	9.6
3.	Gupta, B.M.	CSIR-NIScPR, India	5 (0.9)	37 (0.8)	7.4
4.	Hassanzadeh, M	Tarbiat Modares University, Iran	5 (0.9)	31 (0.7)	6.2
5.	Rousseau, R	University of Antwerp, Belgium	5 (0.9)	19 (0.4)	3.8
6.	Sangam, S.L.	Karnataka University, India	5 (0.9)	56 (1.2)	11.2
7.	Wang, Ming Haung	Asia University, Taiwan	5 (0.9)	41 (0.9)	8.2
8.	Alguliev, Ramiz M.	Institute of Information Technology, Azerbaijan	4 (0.7)	28 (0.6)	7.0
9.	Elango, B	IFET College of Engineering, India	4 (0.7)	50 (1.1)	12.5
10.	Garg, K.C.	CSIR-NIScPR, India	4 (0.7)	18 (0.4)	4.5
11.	Rao, IKR	PES University, India	4 (0.7)	17 (0.4)	4.3
12.	Riahi, Aref	Islamic Azad University, Iran	4 (0.7)	24 (0.5)	6.0
Sub total			64 (11.0)	492 (10.6)	7.7
Other	Other 440 authors contributing papers in the range 1-3			4129 (89.4)	8.0
Total a	uthors = $12+440 = 452$		582 (100.0)	4621 (100.0)	7.9

Table 4B: Most prolific authors and impact of their output JSR.

#	Author	Institutions	TP (%)	TC (%)	CPP
1.	Gupta, B M	CSIR-NIScPR, New Delhi	11 (1.7)	103 (2.2)	9.4
2.	Dhawan, S M	CSIR-NPL, New Delhi	8 (1.2)	83 (1.7)	10.4
3.	Gupta, Ritu	Sri Venkateshwar University, Meerut	8 (1.2)	68 (1.4)	8.5
4.	Bhattacharya, Sujit	CSIR-NIScPR, New Delhi	6 (0.9)	56 (1.2)	9.3
5.	Aliguliyev, Ramiz M	Institute of Information Technology of Azerbaijan (NAS), Azerbaijan	5 (0.8)	136 (2.9)	27.2
6.	Das, Anup Kumar	JNU, New Delhi	5 (0.8)	105 (2.2)	21.0
7.	Desai, Pranav N	JNU, New Delhi	5 (0.8)	36 (0.8)	7.2
8.	Kostoff, R N	Georgia Institute of Technology, USA	5 (0.8)	32 (0.7)	6.4
9.	Saha, Snehanshu	PES University, India	5 (0.8)	18 (0.4)	3.6
10.	Singh, Vivek Kumar	Banaras Hindu University, India	5 (0.8)	55 (1.2)	11.0
11.	Lewison, Grant	Kings College London	5 (0.8)	34 (0.7)	6.8
12.	Bhanumurthy, Karanam	BARC, Mumbai	4 (0.6)	31 (0.7)	7.8
13.	Dutta, Bidyarthi	Vidyasagar University, India	4 (0.6)	15 (0.3)	3.8
14.	Kademani, B S	BARC, Mumbai	4 (0.6)	31 (0.7)	7.8
15.	Dey Sudeepa Roy	PES University, India	4 (0.6)	14 (0.3)	3.5
Sub-tota	Sub-total			817 (17.2)	9.7
Other 52	5 authors contributing papers i	n the range 1-3	572 (87.2)	3935 (82.8)	6.9
Total aut	hors		656 (100.0)	4752 (100.0)	7.2

Table 5: Pattern of citations.

	Pattern of citations in CJSIM		Pattern of citations i	n JSR
Number of citations	Papers (%)	Total citations	Papers (%)	Total citations
Uncited	36 (15.6)	0	26 (9.8)	0
1	25 (10.5)	25	29 (10.5)	29
2	17 (7.2)	34	41 (14.9)	82
3	21 (8.9)	63	28 (10.2)	84
4	18 (7.6)	72	29 (10.5)	116
5	17 (7.2)	85	14 (5.1)	70
6	10 (4.2)	60	16 (5.8)	96
7	14 (5.9)	98	17 (6.2)	119
8	7 (3.0)	56	8 (2.9)	64
9	8 (3.4)	72	4 (1.5)	36
10	4 (1.7)	40	8 (2.9)	80
11-15	25 (10.5)	323	25 (9.1)	327
16-20	13 (5.5)	227	10 (3.6)	177
> 20	21 (8.9)	629	19 (6.9)	951
Total	236 (100.0)	1784	276 (100.0)	2231

bibliometric indicators. Of the total papers contributed by these prolific institutions about 25.4% were cited 10 or more times and 15 (11.5%) papers remained uncited. Among these nine institutions, the output is mainly concentrated in two institutions, namely Dalian University of Technology, China, and Asia University, Taiwan. These two institutions together contributed about eight per cent of the total output. As mentioned above, CPP for the global output published in the journal is 7.9. Among these eight institutions the highest CPP was for Shahid Chamran University, Iran, and Karnataka University, India. These two institutes has high values of CPP, because, 46% papers published by Shahid Chamran University (Iran) and 60% papers contributed by Karnataka University (India) were cited 10 or more times. Lowest CPP is for Dalian University of Technology (China), because of the 26 papers published by the university only two papers were cited 10 or more times.

#### **JSR**

Two hundred ninety-eight institutions located in India and abroad contributed 656 publications. Thus, on an average 2.2 paper was contributed by each institute. Of the 298 institutions, 99 institutions were located in different states of India and the remaining 199 institutions were located in other 49 countries scattered in different parts of the globe. Table 3B lists eight institutions that contributed 10 or more papers along with their citations and other bibliometric indicators. These eight prolific institutions together contributed about 22% papers of the total output and also attracted about the same proportion of total citations. Among these eight institutions, the output is mainly concentrated in two Indian institutions, namely Jawaharlal

Nehru University, New Delhi and CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR) formerly CSIR-National Institute of Science, Technology and Development Studies. These two Indian institutions contributed about nine per cent of the total output. The global value of CPP for the output published in the journal is 7.2. Among these eight institutions, four institutions had either more or equal CPP as the global CPP and for the remaining four CPP was lower than the global CPP. The highest CPP (11.2) was for Banaras Hindu University, Varanasi followed by Jawaharlal Nehru University, New Delhi. Banaras Hindu University, Varanasi had high CPP because one paper published by scholars from the university was cited 30 times and none of its paper remained uncited. Value of CPP for Jawaharlal Nehru University, New Delhi was high because of the 31 papers published by the scholars of the university, one paper was cited 70 times. Lowest CPP is for Dalian University of Technology (China), because, of the 15 papers published by it, no paper was cited 10 or more times and also about one-third of the paper published by the university remained uncited.

## Prolific authors and the impact of their output CJSIM

Table 4A presents the output data and its impact in terms of CPP for prolific authors. In all 452 authors scattered in 39 different countries contributed 582 papers. Thus, the productivity per author is 1.3 papers approximately. Of the 452 authors, 363 (81.8%) authors contributed only one paper and remaining 89 authors produced more than one paper each. Table 4A lists 12 authors who contributed four or more papers along with their CPP. Among the 12 prolific authors, five authors were from India,

Table 6A: Highly cited papers (CJSIM).

#	Bibliographic details of the paper with country of origin of the paper	Number of citations	CPY (Rank)
**1	Tripathi, M., Kumar, S., Sonker, S.K., & Babbar, P. (India). <i>CJSIM</i> , <i>12</i> (2), 2018, 215-232.	81	16.2 (2)
2	Osareh, F., Khademi, R., Rostami, M.K., & Shirazi, M.S. (Iran). <i>CJSIM</i> , 8(2), 2014, 263-271.	43	4.8 (5)
*3	*Bornmann, L., *Stefaner, M., *Anegón, F.D.M., & 'Mutz, R' (*Germany, *Spain, & 'Switzerland).  CJSIM, 9(1), 2015, 65-72.	40	5.0 (4)
4	Markscheffel, B., & Schröter, F. (Germany). <i>CJSIM</i> , <i>15</i> (2), 2021, 365-396.	39	19.5 (1)
5	De Souza Vanz, S.A., & Stumpf, I.R.C. (Brazil). <i>CJSIM</i> , 6(2), 2012, 315-334.	35	3.2 (8)
**6	Mahesh, G., & Wadhwa, N.K. (2012). (India) CJSIM, 6(2), 2012, 263-272.	30	2.7 (9)
*7	*Elango, B., & *Ho, Y.S. (*India, & *Taiwan).  CJSIM, 12(2), 2018, 289-307.	30	6.0 (3)
8	Syamili, C., & Rekha, R. V. (India). <i>CJSIM</i> , 11(1), 2017, 103-117.	28	4.7 (6)
**9	Bousari, R. G., & Hassanzadeh, M. (Iran). CJSIM, 6(2), 2012, 215-227.	26	2.4 (10)
10	Beaver, D.D. (USA).  CJSMI, 7(1), 2013, 45-54.	26	2.6 (9)
11	Velmurugan, C., & Radhakrishnan, N. (India). CJSIM, 9(2), 2015, 193-204.	25	3.1 (8)
**12	Ahmad, S.A.J., Abdel-Magid, I.M., & Hussain, A. (Saudi Arabia). CJSIM, 11(1), 2017, 133-151.	25	4.1 (7)
Total		428 (24%)	
*Paper pub	lished in international collaboration, **Paper published in domestic collaboration.		

two each from Iran and Taiwan, and one each from Azerbaijan, Belgium and Germany. Among the 12 authors Yuh-Shan Ho of Asia University of Taiwan topped the list with 12 papers followed by Lutz Bornmann from the Max Planck Society (Headquarters) Germany. Among all the authors the value of CPP is highest for B. Elango (IEFT College of Engineering, India) followed by S.L. Sangam (Karnataka University, India) and Bornmann Lutz (Max Planck Society (H. Qtrs.), Germany). Authors explored the reason for high CPP for Elango B found that one papers by the author was published in international collaboration with Ho Yuh-Shan which was cited 30 times. Also, CPP for Bornmann Lutz is high because one paper of the author is among the highly cited papers. Possible reason for low CPP for other authors is that a large proportion of papers published by these authors remained uncited.

#### **JSR**

In all 540 authors scattered in 50 different countries contributed 656 papers. Thus, the productivity per author is 1.3 papers approximately. Of these, 193 authors were from India and remaining 327 were from other countries of the globe. Of the 540 authors, 480 (88.5%) authors contributed only one paper and remaining 60 authors produced more than one paper each. Table 4B lists these 15 authors who contributed four or more papers along with the value of CPP. Among these 15 prolific authors, 12 authors were from India, and one each from Azerbaijan, the UK and the USA. Among the 15 authors B.M. Gupta of CSIR-NIScPR, New Delhi topped the list with 11 papers. Among all the authors the value of CPP is highest (27.2) for Aliguliyev, Ramiz M of Institute of Information Technology of Azerbaijan (NAS) followed by Anup Kumar Das of the Jawaharlal Nehru, New Delhi with a CPP of 21. Of the 15 prolific authors, five authors had a low CPP as compared to the global CPP. Authors explored the reason for high CPP for Aliguliyev, Ramiz M and Anup Kumar Das found

Table 6B: Highly cited papers (JSR).

#	Bibliographic details of the paper with country of origin of the paper	Number of citations	CPY (Rank)
1	Derviş, H. (Turkey).  JSR, 8(3), 2020, 156–160.	310	103.3 (1)
2	JSR, 3(3), 2020, 130–100.  Leta, J. (Brazil).  JSR, 1(1), 2012, 44–52.	93	8.5 (3)
**3	Das, A., & Mishra, S. (India).  JSR, 3(2), 2014, 82-92.	75	8.3 (3)
*4	*Leydesdorff, Loet, & *Felt, Ulrike. (*The Netherlands, *Austria)  JSR, 1(1), 2012, 28-34.	62	5.6 (4)
*5	*Abdi, A., *Idris, N., \$Alguliyev, R.M., & Aliguliyev, R. M. (*Malaysia, & Azerbaijan).  **JSR, 7(1), 2018, 54–62.	61	12.2 (2)
6	Thompson, D.F. (USA).  JSR, 7(3), 2019, 167–172.	34	8.5 (3)
7	Arik, E. (Turkey).  JSR, 4(1), 2015, 20-28.	32	4.0 (7)
8	Waila, P., Singh, V.K., & Singh, M.K. (India).  JSR, 5(1), 2016, 71–84.	30	4.3 (6)
9	Megnigbeto, E. (Republic of Benin). <i>JSR</i> , 2(3), 2013, 214-222.	29	2.9 (9)
10	Jeyasekar, J.J., & Saravanan, P. (India).  JSR, 4(3), 2015, 135-142.	27	3.3 (8)
11	Bakri, A., Azura, N.M., Nadzar, M., Ibrahim, R., & Tahira, M. (Malaysia). <i>JSR</i> , 6(2), 2017, 86–101.	27	4.6 (5)
Total		780 (35%)	
*Paper pul	olished in international collaboration, **Paper published in domestic collaboration.		

Table 7 A: Pattern of output in domestic collaboration (CJSIM).

#	Country	Papers in domestic collaboration
1.	India	32
2.	Iran	15
3.	China	4
4.	Germany, Taiwan and Brazil 3 papers each	9
7.	Saudi Arabia, Nigeria, Pakistan, Indonesia 2 papers each.	8
11.	Russia, Turkey, Greece, Slovenia, Canada & France 1 paper each.	6
Tota	1 (%)	74 (31.4)

that one paper each by both the author was cited more than 60 times resulting in high CPP for both the authors. Possible reason low CPP for other authors is that a large proportion of papers published by these authors remained uncited. Lowest value of

CPP was for Saha, Snehanshu of the PES University and Dutta, Bidyarthi of Vidyasagar University and Dey Sudeepa Roy.

#### Pattern of citation in CJSIM and JSR

The impact of each article published in a journal can be measured by counting the number of times these are cited by other articles. High levels of citation to a publication are interpreted as signs of influence, impact, and visibility. An author's visibility can be measured through a determination of how often his/her publications have been cited in publications by other authors. Table 5 shows the citation distribution of papers published in CJSIM and JSR from 2012 to 2023 (February 5, 2024). During this period, 236 papers published in CJSIM received 1784 citations and 275 papers published in JSR received 2231 citations. Of the total papers included in the analysis in the two journals, 37 (15.6%) and 27 (9.8%) did not receive any citation for CJSIM and JSR respectively. Tables 6A and 6B lists highly cited papers for CJSIM and JSR respectively.

Table 7B: Primary institute and collaborating institutions.

India			
#	Primary Institute (Total papers)	Collaborating Institutes (Total papers)	
1.	CSIR-NIScPR, New Delhi (5)	CSIR-NPL, New Delhi (3), GMCH, Chandigarh (1), University of Delhi, Delhi (1)	
2.	Jawaharlal Nehru University (3)	IGNOU (1), NIScPR (1), Babasaheb Bhimrao Ambedkar University (1)	
3.	Karnataka University, Dharwad (2)	Karnataka Science College, Karnataka (1), Documentation Research and Training Centre, Karnataka (1)	
4.	Ananda Mohan College, Kolkata (2)	City College, Kolkata (2)	
6.	Kuvempu University, Shimoga (2)	Tumkur University, Tumkar (2)	
	Total	14	
	Collaborative papers of other institutions	18	
	Grand total	32	
Iran	Iran		
#	Primary Institute (Total papers)	Collaborating Institutes	
1.	Islamic Azad University (4)	Tarbiat Modares University (1), Payame Noor University (1), Kharazmi University (1) and Razi University (1)	
2.	Shahid Beheshti University (3)	Research Institute of Petroleum Industry (1), Shahid Chamran University (1), National Research Institute for Science Policy (1)	
3.	Shahed University (2)	Tarbiat Modares University (1), Scientific Information Database (2)	
4.	Shahid Chamran University (2)	Amir Al Momenin Library (2),	
	Total	11	
	Collaborative papers of other institutions	4	
	Grand Total	15	

Table 8 A: Pattern of output in domestic collaboration (CJSIM).

#	Country	Papers in domestic collaboration
1.	India	46
2.	Iran	12
3.	Brazil, The Netherlands, Romania, Turkey and UK (3 each)	15
4.	Mexico, Spain, and USA (2 each)	6
5.	Australia, Austria, Bosnia, Chile, Fiji, France, Germany, Greece, Korea, Poland, Saudi Arabia, Thailand and Vietnam (1 each)	13
Tot	al	92

#### **Highly cited papers**

Tables 6A and 6B lists papers that received 15 or more citations from 2012 to 2024 (15 January 2024 to February 5, 2024) for CJSIM and JSR respectively. These have been denoted as highly cited papers.

#### **CJSIM**

CJSIM published 21 papers which were cited 20 or more times during the study period. Of these 12 papers were cited 25 or more times in CJSIM. These 12 papers were contributed by authors from India (4) followed by Iran (2), and one each from Brazil, Germany, Saudi Arabia and USA. Remaining two papers were published in international collaboration among Germany, Spain and Switzerland and the other in collaboration between India and Taiwan. Of the four papers contributed by Indian authors, two were published in domestic collaboration by authors from different institutions. These 12 highly cited papers attracted about one third (~24%) of all citations. As the number of citations received varies according to the citation window, hence to normalize this variation in citations, authors calculated Citation Per Year (CPY) used earlier by Garg and Tripathi.[17] Analysis of data based on CPY indicates that the rank of authors arranged by total citations received changes significantly if arranged by CPY. For instance, the author ranked at # 4 will change to rank 1 if arranged by CPY. Similarly, the paper ranked at # 1 will change to rank 2 and # 7 change to rank 3. Similarly, the rank of other

Table 8B: Primary collaborator institute and collaborating institutions.

India			
#	Primary Institute (Total papers)	Collaborating Institutes (Total papers)	
1.	Banaras Hindu University (5)	CSIR-NIScPR (3), Mizoram University (1), South Asian University (1)	
2.	Jawaharlal Nehru University (3)	DST (1), Vidyasagar University (1), Commonwealth Educational Media Centre for Asia (1).	
3.	CSIR-NIScPR (7)	BHU (1), CSIR-NPL (5), Sri Venkateswar University, Meerut (3)	
4.	Sri Venkateswar University, Meerut (3)	Phcog.Net and Sci. Biol. Med (2), CSIR-NPL (1), Individual author (3)	
5.	PESIT Bangalore South Campus (2)	DRTC (1), IIT Patna (1)	
6.	University of Calcutta (2)	Saha Institute of Nuclear Physics (1), Ananda Mohan College (1)	
	Total (22)	Total Institutes = 17 including individual author	
	Collaborative papers of other institutions	24	
	Grand total	46	
Iran	D 111 (2)	01	
1.	Razi University (3)	Shiraz University of Medical Sciences (2),	
		Ilam University (1), Payme Noor University (1)	
2.	Tehran University of Medical Sciences (1)	Shahed University (1), National Research Institute for Science Policy (1)	
3.	Urmia University of Medical Sciences (1)	Azad University (1), Ardabil University of Medical Sciences (1)	
4.	Shahid Bahonar University of Kerman (1)	Allameh Tabatabai University (1), Kerman University of Medical Sciences (1)	
5.	Hamadan University of Medical Sciences Medical department (1)	Hamadan University of Medical Sciences LIS (1)	
6.	Isfahan University of Medical Sciences (1)	Shahid Chamran University of Ahvaz (1)	
7.	Kharazmi University (1)	Payme Noor University (1)	
8.	Payme Noor University (1)	Islamic Azad University (1)	

India		
#	Primary Institute (Total papers)	Collaborating Institutes (Total papers)
9.	Shahid Beheshti University of Medical Sciences (1)	Iran University of Medical Sciences (1)
10.	Shiraz University of Medical Sciences (1)	Bushehr University of Medical Science (1)
Total (12)		Total institutions = 15

papers also changes. Rank of different papers can be seen from the last column of Table 6A.

#### **JSR**

Of the 276 papers published in JSR 11 papers were cited 27 or more times during the study period. These 11 papers were contributed by India (3), Turkey (2), and one each from Brazil, USA and the Republic of Benin. All the three papers contributed by Indian authors were published in domestic collaboration among different institutions. Two papers were published in international collaboration between the Netherlands & Austria and the other between Malaysia and Azerbaijan. These 11 papers attracted about 35% of all citations. Among these papers, paper authored by H. Dervis from Turkey received the highest (310) citations followed by Leta Jacqueline with 93. However, the rank of these papers changes if arranged by Citation Per Year (CPY). For instance, paper ranked at 5 and 6 changes to 2 and 3 respectively. Similarly, the rank of other papers also changes. This can be seen from the last column of Table 6B.

## Pattern of papers published in domestic collaboration

Tables 7A and 7B present details of countries and institutions which published papers in domestic collaboration for CJSIM. Data for JSR for the collaboration have been depicted in Tables 8A and 8B.

#### **CJSIM**

Of the 39 countries which published papers in the journal during the study period from 2012 to 2021 only 16 countries published 74 papers in domestic collaboration (Table 7A) constituting about 31% of total papers published in the journal. Among these 16 countries, India, the publishing country of the journal topped the list with 32 papers in domestic collaboration followed by Iran with 15 papers. Thus, these two countries published 47 (63.5%) of total papers published in domestic collaboration. Remaining 14 countries published 27 papers in domestic collaboration. The number of papers published by each country has been depicted in Table 7A. Further analysis of data on domestic collaboration indicates that 118 institutions from different countries contributed these papers. Table 7B list name of primary institution and

Table 9A: Pattern of output in international collaboration (CJSIM).

SI. No.	Primary collaborator	Collaborative partner country	Papers in international collaboration
1.	China	Germany, Taiwan, the Netherlands and Pakistan	9
2.	Russia	Germany, the Netherlands, and USA	4
3.	Iran	Germany and the UK (2)	3
4.	USA	Russia, India, Jordon, Bahrain and Bangladesh	3
5.	India	Germany and Taiwan	2
6.	Germany	The Netherlands, Spain and Switzerland	2
7.	France	Australia	2
8.	Saudi Arabia	Kazakhstan, Azerbaijan and Australia	2
Other 11 countries publishing one paper each as primary collaborator: Bangladesh, Belgium, Greece, Hungary, Korea, Malaysia, Nigeria, the Netherlands, Sri Lanka, Taiwan, and Turkey one paper each.			11
Total papers		38	
Total countries		19	

Table 9B: Pattern of output in international collaboration (JSR).

SI. No.	Primary collaborator	Collaborative partner country	Papers in international collaboration
1.	Brazil	Portugal, Germany, Spain and Columbia	3
2.	USA	Mexico, The Netherlands, and India	3
3.	India	The Netherlands, Canada and Saudi Arabia	3
4.	Saudi Arabia	China, India and Taiwan	2
5.	China	Turkey, and Belgium	2
6.	Italy	UK, Russia and Finland	2
7.	Korea	India and Bangladesh	2
8.	South Africa	Germany and India	2
Other 13 countries publishing one paper each as primary collaborator: Argentina, Belgium, Canada, Ecuador, Hungary, Iran, Israel, Malaysia, The Netherlands, Nigeria, Sweden, and Uruguay and UK			13
Total papers			32
Total countries			21

collaborating institutions from India and Iran which published 10 or more papers in domestic collaboration.

#### **JSR**

Of the 50 countries which published papers in the journal during the study period from 2012 to 2021, 23 countries published 92 papers in domestic collaboration (Table 8A) constituting about 33.4% of total papers published in the journal. Among these 23 countries, India topped the list with 46 papers in domestic collaboration followed by Iran with 12 papers. Thus, these two countries published 58 (61.7%) of total papers published in domestic collaboration. Remaining 21 countries published 34 papers in domestic collaboration. The number of papers published by each country has been depicted in Table 8 A. Further analysis of data on domestic collaboration indicates that 147 institutions

located in different parts of the globe contributed these papers. Table 10B list name of primary institution and collaborating institutions from India and Iran which published 10 or more papers in domestic collaboration.

### Pattern of papers published in international collaboration

Tables 9A and 9B depicts details of papers published in international collaboration in the two journals respectively.

#### **CJSIM**

Of the 39 countries which contributed papers to the journal, only 19 countries contributed 38 papers in international collaboration (Table 9A). These 38 papers were contributed by 32 institutions located in different countries. Of these 19 countries, the highest

number of papers in international collaboration were published by China (9) followed by Russia (4) Iran and USA (3 each), France, Germany, India and Saudi Arabia (2 each). Remaining 11 countries published only one paper each in international collaboration. Collaborative partners for each country is depicted in Table 9A. Among the countries listed in Table 9A, USA had collaborative links with five countries followed by China with collaborative links with four countries and Germany, Russia, and Saudi Arabia with three different countries. All other countries had collaborative links only with one country except India and Iran which had collaborative links with two countries.

#### **JSR**

Of the 50 countries which contributed papers to the journal, 21 countries contributed 32 papers in international collaboration (Table 9B). Thirty-two institutions located in different countries contributed these papers. Of these 19 countries, Brazil, USA, and India contributed three papers each in international collaboration and China, Italy, Korea, Saudi Arabia, and South Africa published two papers each in international collaboration. Remaining 13 countries published only one paper each in international collaboration. Collaborative partners for each country is depicted in Table 10B. Among the countries listed in Table 9B, only Brazil had collaborative links with four countries, USA and India had collaborative links with three countries each. Countries publishing one paper in collaboration had collaborative links only with one country.

#### FINDINGS OF THE STUDY

Based on the complete count of papers, the present bibliometric study analysed 582 papers published in CJSIM and 656 papers in JSR on several bibliometric indicators like CPP, i-10 index and papers not cited. Both the journals published almost equal number of research articles and reviews. However, JSR also published some other type of documents like perspective paper, research note, and commentary resulting in more number of records as compared to CJSIM. An inconsistent pattern of output during the study period has been observed in both the journals. JSR attracted papers from more number of countries as compared to CJSIM. India followed by Iran contributed the highest number of papers in both the journals. Foreign authored contributions were more in CJSIM as compared to JSR. Global CPP for both the journals were almost equal. Papers cited 10 or more times was slightly more in CJSIM than JSR. Share of uncited papers was more in CJSIM as compared to JSR.

Productivity per institutions for both the journals is almost the same. Of the 239 institutions which contributed to CJSIM, Dalian University of Technology, China topped the list with 26 (4.5%) papers with lowest CPP among all the nine institutions. CPP and i-10 index was highest for Shahid Chamran University, Iran. Of

the 298 institutions which contributed to JSR, Jawaharlal Nehru University, New Delhi and CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR) topped the list of contributing institutes. However, among the eight prolific institutions, the highest CPP is for Banaras Hindu University Varanasi followed by Jawaharlal Nehru University, New Delhi. Like CJSIM, the lowest CPP in JSR is also for Dalian University of Technology (China).

Number of authors who contributed to the two journals were almost equal. Like institutions, the highest number of authors were also from India. Among the prolific authors in CJSIM, Yuh-Shan Ho of Asia University of Taiwan topped the list with 12 papers while CPP is highest for B. Elango (IEFT College of Engineering, India). Among the prolific authors in JSR, B.M. Gupta of CSIR-NIScPR, New Delhi topped the list with 11 papers with the highest CPP for Aliguliyev, Ramiz M of Institute of Information Technology of Azerbaijan (NAS), Azerbaijan. Number of highly cited papers in both the journals were almost equal. Number of papers which remained uncited was slightly more in CJSIM. Almost equal number of papers were cited 20 or more times.

Seventy-four papers were published by 16 countries in domestic collaboration constituting about 31% of total papers published in CJSIM, while 92 papers were published in domestic collaboration by 23 countries in JSR. India and Iran contributed the highest number of papers in domestic collaboration in both the journals. CSIR-NIScPR had the highest number of collaborative links with other institutions in both the journals.

Number of countries publishing papers in international collaboration in both the journals were equal. In CJSIM, 19 countries contributed 38 papers in international collaboration and 21 countries published 32 papers in international collaboration in JSR. The highest number of papers in international collaboration were contributed by China followed by Russia in CJSIM. Brazil, USA, and India contributed three papers each in international collaboration in JSR.

#### **CONCLUSION**

Based on the above stated findings it is observed that more number of countries, institutions, and authors contributed papers to JSR as compared to CJSIM. Also, the share of papers published by authors from abroad was more in CJSIM as compared to JSR. Number of articles and reviews published in the two journals were almost equal. CPP for papers published in both the journals differed marginally. Papers cited 10 or more times was slightly more in CJSIM than JSR. However, share of uncited papers was more in CJSIM as compared to JSR. Based on this it can be stated that the two journals did not differ much on different bibliometric parameters.

#### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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