# MAPPING OF COLLABORATIONS AND PUBLICATIONS PATTERN OF SOCIOLOGY RESEARCH IN INDIA BETWEEN 1991 AND 2020: A SCIENTOMETRIC STUDY

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## Abstract

*Recent past year, there has been renewed interest in research evaluations and it play vital role for building reputations of country, organization, institutes and also individual researcher. Several studies have documented on research evaluation using bibliometric cc indicator. In this paper, applied bibliometrics indicator for evaluate the research preference of Sociology research published in India between 1991 and 2020. We accessed Scopus database and retrieved 2410 publications. The growth of both citations and publications was not stable overtime period fluctuated. Result showed that, Indian Sociologist scholarly communion communicated in various format and preferable source of journal was "Economic and Political Weekly". More than half of the publications communicated individually rather than collaboratively. Jawaharlal Nehru University and University of Delhi standout in top leading organization in terms of contributions. Top most frequently keyword was "India". Indian sociologist prefers to collaborate with developing countries such as USA and UK.*

**Keywords:** Sociology Research, Research Evaluation, Collaborations and Publications Pattern, Sicentometrics, Bibliometrics, Indian Sociology

## 1. Introductions

Research evaluations play a key role for the development of country, organization, institutes and also individual researcher. In order to know, the strength and weakness of the given area, we often do research evaluation using various parameter and we found that, bibliometric tool has been frequently applied to evaluate the research. In recent past year, several studies have been conducted using bibliometric indicators and periodically evaluate the research performances in science and technology, arts and humanities and social sciences (Abramo et al., 2015; Brink et al., 2006; Ebadi & Schiffauerova, 2015; Kousha & Thelwall, 2017). We may also see that, bibliometric indicator has been applied for ranking of nation, institutes and universities (i.e. QS Ranking, THE Ranking and NIRF Ranking etc.) even if for individual researcher. India is the fifth leading contributor in research in the world (Kanaujia et al., 2022; Kocyigit & Akyol, 2021; Thelwall, 2017). Every year, a large amount of research has been conducted and communicated using

various scholarly platform. These scholarly communications are to be evaluated periodically. (B. M. Gupta et al., 2013) reported that India ranked as 12th position and contributed 1.18 % world share between 2001and 2010. In this paper, we conducted an sicentometrics study on Sociology research publishing Indian researcher using Scientometric indicators.

## 2. Research questions

- RQ: What is the growth of Sociology research in India?
- RQ: What are the publications type in Sociology research in India?
- RQ2: What are the top collaborator in Sociology research in India between 1991 and 2020?
- RQ: Who is top leading contributor in individual organizations in India and abroad?
- RQ: How national and international collaboration happen in Sociology research?
- RQ: What are the key areas of research in Sociology in India?
- RQ: What are the publications and collaborations pattern in Sociology in India?

## 3. Previous research

In the research past year, several bibliometrics and sicentometrics study has been conducted on humanities and social science in India and abroad (Barrot, 2023; Dhawan et al., 2015; Garfield, 1984; Goel & Garg, 1994; Gülgöz et al., 2002; Missen et al., 2020; Norris & Oppenheim, 2007; Sangam, 2001; Seaman & Kaczor, 2017). For instance, (Barrot, 2023) evaluated the research performance of education research contributed by South-East Asian countries. The finding of study showed that 13,527 publications published in 709 different sources indexed in Scopus database. Leading countries from the study region were published to preferred published in top ranked journal. However,

developing countries were preferred to published in low ranking journal indexed at Scopus.

(Missen et al., 2020) reviewed the scholarly research output published by 50 social scientists from Pakistan .The study reported a total 2000 document published social scientist during 2009–2018.Gender disparity in research were found and male dominance in social science research however the gender disparity low in social science research in Pakistan. Due to collaboration in research citation growth were found. Science research were found dominance in the study as compare to social science research.

(B. M. Gupta et al., 2009) made a comparative study of research performance of social science research of Brazil, China and India using bibliometric indicator. Study reported that India ranked as 13 position in Social Science research and USA was the top leading contributor in social science research. China was leading contributor of number (29282) of research publications among Brazil (6472) and India (13596) while Brazil was received high average rate of citation ((1.66) as compare to India (0.82) and China (0.52) between 1996 and 2007.

(R. Gupta et al., 2014) reported that University of Delhi (654) and Jawaharlal Nehru University, New Delhi (510) was the top leading institute and contributor in the field of social science during 2008-2012 . It was also reported that top 25 academic institutions in India that specialize in the fields of economics, econometrics, and finance have made a significant contribution to research in these domains, represent 19.87% of the total research output. Similarly, 15.6 % of contributions received from top 25 leading institution in psychology in India.

(Neelamma & Nyamagoudar, 2017) reviewed of political science research output using bibliometric indications. The sample of the data was. The study revealing a steady growth, moderate collaboration, and the dominance of single-author papers in the

South Asian Journal of Socio-Political Studies, with Tamil Nadu emerging as a leading contributor. Out of the total 533 publications, In the year 2009 highest number (63) of articles found, which accounts for approximately 11.63% of the total publications.

(Kaur & Nagaich, 2019) analysed 9525 articles authored by Indian scholars in Social Sciences and Humanities (SSH) from 2005 to 2014, finding a preference for publication in Indian journals and a positive correlation between collaboration and research impact in SSH. the majority of the research conducted resulted in articles being published and almost half of the publications were authored by a single researcher without any collaboration.

(Tripathi et al., 2018) evaluated the Indian social contribution during 2005–2014. Authors reported that 9525 publications contributed Indian social scientist and preferred to publisher their document in Indian origin journal. in the year 2011 and 2014 highest number of publications contributed social scientist. From the result it was found that high impact on collaborative research than single authorship publications.

(Bhui & Sahu, 2018) reported 623 publications published by IIT Kharagapur fulltime faculty during 2000-2016. The study further revealed that majority of publication contributed in the between 2010 and 2014, "Psychological Studies" preferred source of publications. Further reported that both single and collaborations research have been seen during the study year. IITKGP prefers communicated their scholarly output in reputed published such as Sage and Springer and Taylor & Francis etc.

(Parabhoi et al., 2022) examined the scholarly research output published selected ICSSR research institute. A total 4411 document published by Indian Social Scientist and it was preferring to communicate their research in "Economic and Political Weekly" 647. despite of high rate of individual papers, the low rate of average citation found individual authors that collaborative work. Both nation and international collaboration found during the study period.

## 4. Method

In order to collect, Indian sociology publications, the study used Scopus database hence, the database is comprehensive dataset for social science research and frequently used in sicentometrics research. The study used advanced search options and enter subject area"" and affiliated country limited to "India". In order to collect comprehensive literature, We used Scopus subject category and remove irrelevant documents from the result, the study used filtered options (Barrot, 2017, 2023; Khir et al., 2023; Lee, 2023).

The search key terms are as flows "SUBJAREA ( soci ) -sociology AND political AND science AND AFFILCOUNTRY ( India ) AND NOT SUBJAREA ( medi OR nurs OR vete OR dent OR heal OR mult ) AND NOT SUBJAREA ( agri OR bioc OR immu OR neur OR phar ) AND NOT SUBJAREA ( ceng OR chem OR comp OR eart OR ener OR engi OR envi OR mate OR math OR phys )". The search further limited to English language limited 1991-2020. The data exported on 12 Dec, 2023 and included all type of publications (Book, Book Chapter, Conference paper, articles and reviews etc.) for analysis. A total 2410 number of documents found published between 1991 and 2020.

## 5. Data analysis
### 5.1 Growth of Publications in Sociology in India

Table 1 shows an overview of scholarly outcome of sociology research in Indian published between 1991 to 2020. The data shows a significant increase in the number of publications over a period of 30 years. In the year 1991 starting with a mere 3 publications and the number steadily growth, it

was impressive increase up to 2410 publications by 2020. Simultaneously, the number of citations substantial rise from 11 in 1991 to an aggregate of 26673 by 2020, with notable spikes in certain years, most notably in the year 2015. Over a period of time both citations and number of publications fluctuated. It was noted that very few publications and citations found in the year 1994, where the number of publications is low (1) document and received 0 citation. Notable growth observed in both publications and citations in the years 2008, 2009, 2010, 2011 and 2012.

| Year | Citation | No of Documents |
|---|---|---|
| 1991 | 11 | 3 |
| 1992 | 208 | 10 |
| 1993 | 105 | 7 |
| 1994 | 0 | 1 |
| 1995 | 114 | 7 |
| 1996 | 43 | 5 |
| 1997 | 196 | 7 |
| 1998 | 419 | 15 |
| 1999 | 178 | 7 |
| 2000 | 205 | 9 |
| 2001 | 831 | 22 |
| 2002 | 602 | 17 |
| 2003 | 204 | 18 |
| 2004 | 680 | 19 |
| 2005 | 240 | 14 |
| 2006 | 511 | 21 |
| 2007 | 633 | 28 |
| 2008 | 1279 | 48 |
| 2009 | 1553 | 80 |
| 2010 | 1210 | 61 |
| 2011 | 1421 | 74 |
| 2012 | 1787 | 133 |
| 2013 | 1901 | 150 |
| 2014 | 1512 | 126 |
| 2015 | 2820 | 156 |
| 2016 | 1790 | 222 |
| 2017 | 1960 | 264 |
| 2018 | 1571 | 273 |
| 2019 | 1209 | 303 |
| 2020 | 1480 | 310 |
| Grand Total | 26673 | 2410 |

**Table.1 Growth of Publications**

## 5.2 Distribution of Publications by Type of Documents

As shown in table.2 offers a comprehensive overview of the distribution of research documents by types. From the result,

it observed that articles emerge as the dominant (58.92%) of the total publications types and it received (67.47 %) citations. Books, though fewer in number, exhibit significant influence and contributing (13.07 %) of papers and (14.58 %) of citations. Book chapters, representing (18.09%) of publications and (8.78%) of citations. Reviews, with (7.68% ) of publications which contribute substantially to both the number of citations (7.94%). While conference papers, editorials, letters, and notes make up smaller proportions.

| Doc Type | No Papers | % of Paper | No of Citations | % of Citation |
|---|---|---|---|---|
| Article | 1420 | 58.92 | 17995 | 67.47 |
| Book | 315 | 13.07 | 3888 | 14.58 |
| Book chapter | 436 | 18.09 | 2341 | 8.78 |
| Conference paper | 13 | 0.54 | 139 | 0.52 |
| Editorial | 25 | 1.04 | 109 | 0.41 |
| Letter | 1 | 0.04 | 0 | 0 |
| Note | 15 | 0.62 | 82 | 0.31 |
| Review | 185 | 7.68 | 2119 | 7.94 |
| Grand Total | 2410 | 100 | 26673 | 100 |

**Table.2 Distribution of Publications by Type of Documents**

## 5.3 Preferable Source in Sociology Research in India

The below table illustrates top sources of publications in the field of sociology research in India published between 1991 and 2020. The below data comprehensive compare and highlights the diversity in contributions, ranging from general socio-economic and political analyses to specialized areas and it is showcasing the multifaceted nature of sociological research publications in India. The journal "Economic and Political Weekly" emerges as the foremost contributor, contributed 223 papers and received 1983 citations, underscoring its pivotal role in disseminating sociological research. "Contributions to Indian Sociology" reflecting its significant influence and ranked as second position with 57 papers and 675 citations. Sociological Bulletin and Indian Journal of Social Work follow, contributing 42 papers with 87 citations and 38 papers with 36 citations, respectively. Notably, the Indian Journal of Gender Studies stands out in fifth place, contributing 35 papers and accumulating 258 citations. The journal "Social Science and Medicine" with a lower paper count 19 but a remarkably high citation counts 867.

| Rank | Source of Publications | No of Paper | No of Citation |
|---|---|---|---|
| 1 | Economic and Political Weekly | 223 | 1983 |
| 2 | Contributions to Indian Sociology | 57 | 675 |
| 3 | Sociological Bulletin | 42 | 87 |
| 4 | Indian Journal of Social Work | 38 | 36 |

| 5 | Indian Journal of Gender Studies | 35 | 258 |
|---|---|---|---|
| 6 | International Journal of Sociology and Social Policy | 23 | 178 |
| 7 | Man in India | 20 | 11 |
| 8 | Social Science and Medicine | 19 | 867 |
| 9 | History and Sociology of South Asia | 18 | 18 |
| 10 | South Asia Research | 17 | 230 |

**Table.3 Preferable Source of Journals in Sociology**

## 5.4 Most Frequently Used Keywords

The results obtained from keywords analysis are shown in table.4. The most frequently used key term was "India," and it appeared 273 times which is suggesting a strong emphasis on research contextualized within the country. "Gender" holds the second position and indicates a significant focus on gender-related sociological inquiries, with 63 occurrences. The term "caste" ranked as third positions with 40 occurrences. "Identity" and "culture" take the fourth and fifth positions, respectively, highlighting the attention given to understanding individual and collective identities, as well as cultural influences in Indian sociology. Remarkably, "women" ranked as sixth position with most frequently occurring keyword, emphasizing the specific focus on gender issues. Some frequently used keyword were "Democracy", "education", "Religion" and "development these keywords ranked in the top 10 frequently used keywords.

|  | Top Keywords | |
|---|---|---|
| Rank | Words | Occurrences |
| 1 | India | 273 |
| 2 | Gender | 63 |
| 3 | Caste | 40 |
| 4 | Identity | 37 |
| 5 | Culture | 27 |
| 6 | Women | 24 |
| 7 | Democracy | 23 |
| 8 | Education | 23 |
| 9 | Religion | 22 |
| 10 | Development | 21 |

**Table.4 Most frequently Used Keywords**

## 5.5 Top 20 Leading Contributor by Organization in Sociology Research in India

The provided below data outlines the top 20 leading contributor by organization in Indian sociology research and data was ranked by highest the number of documents. It was observed that Jawaharlal Nehru University (JNU) secures the top position with 228 documents, showcasing its central role in shaping sociological discourse in India. Followed by University of Delhi and Tata Institute of Social Sciences claim the second and third positions with 178 and 172 publications, respectively. It was also observed that both technology and management

institutes are ranked in top leading institutes such as the Indian Institutes of Technology (IIT Delhi, IIT Bombay, IIT Kharagpur, and IIT Kanpur) and management schools like the Indian Institute of Management Ahmedabad. Further, some institutes like International Institute for Population Sciences, National Institute of Advanced Studies, and Centre for the Study of Developing Societies underscores the interdisciplinary nature of Indian sociology research. The rankings highlight the collaborative efforts of diverse institutions in advancing sociological knowledge, with JNU and University of Delhi emerging as key leaders in the field.

| Document by Affiliations | | |
|---|---|---|
| **Rank** | **Affiliations** | **No of Doc** |
| 1 | Jawaharlal Nehru University | 228 |
| 2 | University of Delhi | 178 |
| 3 | Tata Institute of Social Sciences | 172 |
| 4 | University of Hyderabad | 72 |
| 5 | Indian Institute of Technology Delhi | 48 |
| 6 | Delhi School of Economics | 42 |
| 7 | O.P. Jindal Global University | 41 |
| 8 | International Institute for Population Sciences | 39 |
| 9 | Indian Institute of Technology Bombay | 36 |
| 10 | Panjab University | 35 |
| 11 | Jamia Millia Islamia | 32 |
| 12 | Indian Institute of Management Ahmedabad | 32 |
| 13 | National Institute of Advanced Studies, Bangalore | 29 |
| 14 | Indian Institute of Management Calcutta | 29 |
| 15 | Azim Premji University | 29 |
| 16 | Indian Institute of Technology Kharagpur | 27 |
| 17 | Indian Institute of Technology Kanpur | 26 |
| 18 | Centre for the Study of Developing Societies India | 26 |
| 19 | Institute of Economic Growth India | 23 |
| 20 | South Asian University | 23 |

**Table.6 Top leading Contributor by Organization in Sociology**

### 5.6 International collaboration in Sociology research in India

Table 7 display the top collaborating countries contributing to Indian sociology research, by the highest number of documents produced in collaboration. The United States leads and ranked as first position with 185 collaborative documents, which clearly shows the extensive international collaboration involving of American researchers in the Indian sociological landscape. UK follows closely with 121 documents, reflecting a robust partnership in sociological research between Indian and British institutions. It was also observed from the below table that, India socialist made diverse and global network of research collaboration involving in these countries, Australia, Netherlands, and Germany, with 52, 47, and 42 collaborative documents, respectively. Canada, France, South Africa, China, and Brazil also emerge as prominent collaborators, showcasing the widespread international engagement in Indian sociology research.

| Top Collaborator | | |
|---|---|---|
| Rank | COUNTRY/TERRITORY | No of Doc |
| 1 | United States | 185 |
| 2 | United Kingdom(UK) | 121 |
| 3 | Australia | 52 |
| 4 | Netherlands | 47 |
| 5 | Germany | 42 |
| 6 | Canada | 40 |
| 7 | France | 34 |
| 8 | South Africa | 29 |
| 9 | China | 27 |
| 10 | Brazil | 23 |
| 11 | Japan | 23 |
| 12 | Norway | 22 |
| 13 | Sweden | 19 |
| 14 | Switzerland | 19 |
| 15 | South Korea | 17 |

**Table.7 Top 15 Collaborator by Country**

## 5.7 Authorship Pattern:

From the below, it was noted that Indian sociology publications have a diverse range of authorship patterns, with a majority of single-author publications, it was followed by two-author and three-author collaborations. Closer inspection of the table 8 shows that significant proportion of publications, accounting for (57.88%) are attributed to single authors Indian sociology research, which indicates significant prevalence of independent scholarly contributions. Interestingly, Two-author publications constitute (17.01%) of the total followed by Three-author papers contribute to (7.3%), suggesting a moderate presence of collaborative efforts involving three authors. Four-author papers follow, comprising 3.82% of the total, while publications with more than four authors contribute (13.98%), ranked at third highest number of publications.

| Authorship Pattern | No of Paper | % of Paper |
|---|---|---|
| Single authors | 1395 | 57.88 |
| Two author | 410 | 17.01 |
| Three Authors | 176 | 7.3 |
| Four Authors | 92 | 3.82 |
| More than four | 337 | 13.98 |

**Table.8 Authorship pattern in Sociology research India between 1991-2020**

## 5.8 Conclusion and discussion:

The current research carried out on research outcome on "Sociology" published in India between 1991 and 2020 using Scopus database. From the result, it was revealed that majority of the scholarly communication type was research article 58.92% followed by book chapter and books. Which indicates, that Indian Sociologist prefer to communicate in journals and research articles. It was also observe from the result, Sociologist prefer communicated their scholarly output in "Economic and Political Weekly". More than half of the publications communicated individually rather than collaboratively. Jawaharlal Nehru University and University of

Delhi standout in top leading organization in terms of contributions. These results suggest that, they are showcasing its central role in shaping sociological discourse in India. The most frequently used term, "India," appears 273 times, suggesting a strong emphasis on research contextualized within the country. "Gender" holds the second position, indicating a significant focus on gender-related sociological inquiries, with 63 occurrences. The United States leads the list with 185 collaborative documents, underscoring the extensive international collaboration involving American researchers in the Indian sociological landscape. The United Kingdom follows closely with 121 documents, in summary, these results reflecting a robust partnership in sociological research between Indian and British institutions. This collaborative landscape emphasizes the global nature of sociological inquiries in India, benefitting from a rich exchange of ideas and perspectives among scholars from various nations.

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