

## Citation Analysis of PhD Theses in Sociology Submitted to University of Delhi during 1995-2010

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### ABSTRACT

The paper presents citation analysis of PhD theses submitted in the discipline of sociology of the University of Delhi during 1995-2010. The study is based on the 5766 citations taken out from 25 PhD theses of sociology. The study presents analysis of several parameters like authorship pattern, forms of literature, country-wise scattering of citations, distribution of Indian and foreign citations and a ranked list of top 30 cited sociology journals. The study finds that highest number of citations was single authored (83.94 %), and 67.23 % citations were from books and only 22.20 % citations were from journals. The country-wise scattering of citations reveals that 2536 (45.52 %) citations were from India and it was followed by USA and UK.

**Keywords:** Citation analysis, citation studies, PhD theses, research productivity, sociology, University of Delhi

### 1. INTRODUCTION

Citation analysis is an indirect method to assess the information/sources used by various categories of users. Citation analysis is a worthwhile area of research and refers to references in one text to another text, with information on where that text can be found. Citation analysis is useful for understanding subject relationships, authorship pattern, impact, publication trends, and so on. With citation analysis one can evaluate and interpret citations received by articles, authors, institutions, and other indications of scientific activity. Citation analysis is a major area of bibliometric research, which uses various methods of citation analysis to establish relationships between authors or their work<sup>1</sup>.

The present study analyses the citations appended in the theses of sociology, accepted by University of Delhi during 1995-2010. Sociology is the study of human social life. It is an area which uses various methods of empirical investigation and critical analysis to develop a body of knowledge about human social activity<sup>2</sup>. Sociology enables us to understand the structure and dynamics of society, and their intricate connections to patterns of human behavior and individual life changes. It examines the ways in which the forms of social structure-groups, organisations, communities, social categories such as class, sex, age, or race, and various social institutions such as kinship, economic, political, or religious affect human attitudes, actions, and opportunities<sup>3</sup>.

### 2. LITERATURE REVIEW

Various studies have been carried out on citation analysis. For the present study the following studies have been reviewed in the light of the topic. Zafrunnisha<sup>4</sup> found that foreign journals were the most cited sources as compared to Indian journals. In authorship pattern collaborative authorship is high as compared to single authored papers.

Jadhav<sup>5</sup>, *et al.* in their study reveals that books were most cited documents 1549 (29.39 %), and maximum number 3675 (62.61 %) of citations were from India. It was found that single authorship is dominant. Jan<sup>6</sup> found that books received more citations as compared to journals, and female (52.34 %) contributed more than male (47.66 %). Deshmukh<sup>7</sup> reveals that journals were the most cited form of literature. In authorship pattern single authored papers dominated over other type of authorship.

Chikate & Patil<sup>1</sup> in their study reveal that journal articles were found highly cited followed by books, and web resources, and single authored papers were highly cited. Pillai<sup>8</sup> observed that journal articles were found to be the most frequently cited bibliographic items. USA was the leading cited country and Elsevier Science is the leading cited publisher. Okiy<sup>9</sup> found that most students in education used more textbooks (60.3 %), than other forms of documents.

Harwade & Dankhade<sup>10</sup> in their bibliographic form-wise distribution of citations showed that books accounted for 42.77 % of citations, followed by journals (32.81 %), PhD theses (14.70 %), newspapers (4.50 %) and others (5.22 %). The results also revealed that the single authored papers were the highest in number and half-life period for journals was found to be 22 years. Buttlar<sup>11</sup> observed that about 80 % of the citations were of single authored papers, also journal articles were cited more than books, book chapters, proceedings, theses, and other print resources. The most cited journals were *College & Research Libraries* and *Journal of the American Society for Information Science*.

### 3. OBJECTIVES OF THE STUDY

The main purpose of the study was the citation analysis of PhD theses in the discipline of sociology submitted to University of Delhi during 1995-2010. The objectives of the study are to:

- Study the principal form of literature used by the researchers
- Study the country wise scattering of citations
- Study the distribution of citations according to city of publication
- Identify the leading publishers
- Determine the age of distribution of literature used by the Sociology researchers
- Prepare a list of core journals in sociology
- Study the authorship pattern of cited references, and
- Know the ratio of cited Indian author citations to foreign author citations used by the Indian sociology researchers.

### 4. METHODOLOGY

Data for the present study consists of 25 theses submitted to Department of Sociology, University of Delhi during 1995-2010. All the references listed in these theses were noted down from each thesis by the researchers on a specified 'data capturing sheet' designed for this purpose. The collected references were thoroughly analysed and segregated into the different categories of documents such as books, journal articles, conference papers, reports, theses/dissertations, etc. Each reference made at one time has been counted as one citation. If the same reference was repeated using 'ibid' or 'op cit', it has been counted again. The information relating to each citation, i.e., number of authors, bibliographic form, name of the journal, subject, country of origin, language, name of the publisher, and the availability of references in the library concerned. A total of 5766 citations were found in all the 25 PhD theses. The data was compiled

and analysed using MS-Excel software. Finally, a list of core journals was compiled and prepared on the basis of highly cited articles of the journals in sociology. Name of cited authors were classified into Indian/foreign citations, which were identified by the name of the authors.

## 5. RESULTS AND DISCUSSIONS

### 5.1 Forms of Literature Used by Research Scholars

Table 1 shows distribution of different forms of cited literature used by the sociology researchers in their doctoral theses. Analysis of data indicates that books contributed to the highest number (67.2 %) of citations followed by journal articles (22.2 %), and book chapters (4.3 %). Rest of the citations were scattered in several other document types. Among the rest, reports and conference papers were cited more as compared to other document sources.

**Table 1. Forms of literature used by research scholars**

S. No.	Forms of literature	No. of citations (%)
1.	Books	3877 (67.23 %)
2.	Journal articles	1280 (22.20 %)
3.	Book chapters	246 (4.26 %)
4.	Reports	127 (2.20 %)
5.	Conference papers	113 (1.96 %)
6.	Interviews/Lectures	30 (0.52 %)
7.	Theses/Dissertations	27 (0.46 %)
8.	Unidentified	26 (0.45 %)
9.	Encyclopedias/Year books	17 (0.29 %)
10.	Magazines	14 (0.24 %)
11.	Others (Newspapers, Newsletters, etc.)	9 (0.15 %)
<b>Total</b>		<b>5766 (100 %)</b>

Hence, the study concludes that Sociology researchers used books mostly for their research work. The study also indicates that web-resources did not get any citation.

### 5.2 Country-wise Scattering of Citations

To explore the scattering of the citations according to the country, the authors have used the country of publication of the source item as the basis of citation.

Analysis of data indicates that 5766 citations were scattered in publications that were published from more than 30 countries. Among them, India ranked first with 45.98 % citations followed by USA (26.81 %) and UK (22.42 %). Publications from these countries received about 95 % of the citations and only 5 % citations were from the remaining countries (Table 2).

**Table 2. Country-wise scattering of citations**

S. No.	Country	No. of publications (%)
1.	India	2536 (45.98 %)
2.	USA	1546 (26.81 %)
3.	UK	1293 (22.42 %)
4.	The Netherlands	118 (2.05 %)
5.	Switzerland	33 (0.57 %)
6.	France	26 (0.45 %)
7.	Canada	18 (0.31 %)
8.	Germany	11 (0.19 %)
9.	Japan	11 (0.19 %)
10.	Australia	11 (0.19 %)
11.	Others (17 countries)	54 (0.93 %)
12.	Not found	109 (1.89 %)
<b>Total</b>		<b>5766</b>

### 5.3 City-wise Scattering of Citations

Similar to the country-wise distribution of citations, an attempt has been made to identify the top ten cities of the world in terms of contribution of citations. It indicates that New Delhi ranked first having 24.48 % citations followed by London with 11.47 % and New York with 8.75 %. City-wise publications listed in Table 3 constitute about 61 % of citations.

**Table 3. City-wise scattering of citations**

S. No.	City	No. of publications (%)
1.	New Delhi	1411 (24.48 %)
2.	London	661 (11.47 %)
3.	New York	504 (8.75 %)
4.	Mumbai	333 (5.78 %)
5.	Cambridge	225 (3.91 %)
6.	Berkeley	121 (2.10 %)
7.	Oxford	113 (1.96 %)
8.	Chicago	96 (1.67 %)
9.	Boston	38 (0.66 %)
10.	Bangalore	33 (0.58 %)
11.	Others (182 cities)	1975 (34.25 %)
12.	Not found	256 (4.44 %)
<b>Total</b>		<b>5766 (100 %)</b>

### 5.4 Publisher-wise Scattering of Citations

The publishers-wise analysis of citations shows that more than 100 publishers were involved in publishing the 5766 citations. Table 4 listed only top 10 publishers with 1458 citations. It is viewed from the table that Oxford University press ranked first with 440 publications (30.17 %) followed by Sage publications with 200 publications (13.71 %), and Cambridge University press with 184 publications (12.62 %). A surprising finding of the study was that in spite of the major citations received from the

Indian publications, the Delhi-based Vikas Publishing House was the only publisher which could find place among the top ten publishing houses.

**Table 4. Publisher-wise scattering of citations**

S. No.	Publisher	Count (%)
1.	Oxford University Press	440 (30.17 %)
2.	Sage Publications	200 (13.71 %)
3.	Cambridge University Press	184 (12.62 %)
4.	Routledge	175 (12 %)
5.	University of California Press	144 (9.87 %)
6.	Basil Blackwell	75 (5.14 %)
7.	Penguin	66 (4.52 %)
8.	Orient Longman	65 (4.45 %)
9.	Polity Press	60 (4.11 %)
10.	Vikas Publishing House	49 (3.36 %)
<b>Total</b>		<b>1458 (100 %)</b>

### 5.5 Age-wise Distribution of Literature

Table 5 shows the distribution of literature by age. It can be seen that the maximum numbers of citations (28.52 %) were from the publications published during the period of 1998-1989, followed by the year 1988-1979 with 26.48 % citations and 1978-1969 with 17.91 % citations. The median age of the citations is 2.05.

**Table 5. Age-wise distribution of literature**

S. No.	Time span	No. of citations (%)
1.	2008-1999	620 (10.75 %)
2.	1998-1989	1645 (28.52 %)
3.	1988-1979	1527 (26.48 %)
4.	1978-1969	1033 (17.91 %)
5.	1968-1959	448 (7.76 %)
6.	1958-1949	156 (2.70 %)
7.	1948-1939	81 (1.40 %)
8.	1938-1929	31 (0.53 %)
9.	1928-1919	50 (0.86 %)
10.	1918-1909	80 (1.38 %)
11.	Prior to 1909	71 (1.23 %)
12.	Not found	24 (0.41 %)
<b>Total</b>		<b>5766 (100 %)</b>

### 5.6 Ranking of Core Journals in Sociology

The ranked list of core journals as reflected in the citations is presented in Table 6. It is observed that researchers in Sociology have cited a total of 209 journals. From which only 21 journals, in which the frequency of occurrence is least 10, are listed in the table. The study finds that top two journals namely, *Economic & Political Weekly* with 137 (10.70 %) and *Indian Journal of Psychiatry* with 98 (7.66 %) are from India, which shows that articles from these two journals are highly cited,

followed by *Social Science and Medicine* (7.58 %); *Contributions to Indian Sociology* (2.42 %), and *Journal of Marriage and Family* (2.18 %) citations are from USA, India, and UK respectively.

**Table 6. Ranking of core journals in Sociology**

S. No.	Name of journal	Country	No. of citations (%)
1.	<i>Economic &amp; Political Weekly</i>	India	137 (10.70 %)
2.	<i>Indian Journal of Psychiatry</i>	India	98 (7.66 %)
3.	<i>Social Science and Medicine</i>	USA	97 (7.58 %)
4.	<i>Contributions to Indian Sociology</i>	India	31 (2.42 %)
5.	<i>Journal of Marriage and Family</i>	UK	28 (2.18 %)
6.	<i>American Ethnologist</i>	USA	26 (2.03 %)
7.	<i>Culture, Medicine and Psychiatry</i>	USA	24 (1.88 %)
8.	<i>Annual Review of Sociology</i>	UK	23 (1.80 %)
9.	<i>Jnanadeepa</i>	India	21 (1.64 %)
10.	<i>American Anthropologist</i>	USA	16 (1.25 %)
11.	<i>British Journal of Psychiatry</i>	UK	15 (1.17 %)
12.	<i>Cultural Anthropology</i>	USA	13 (1.01 %)
13.	<i>Social Scientist</i>	India	12 (0.93 %)
14.	<i>Annual Review of Anthropology</i>	USA	12 (0.93 %)
15.	<i>Critical Inquiry</i>	USA	12 (0.93 %)
16.	<i>International Journal of Leprosy</i>	USA	12 (0.93 %)
17.	<i>Journal of Peasant Studies</i>	UK	11 (0.85 %)
18.	<i>Sociology of Health and Illness</i>	UK	11 (0.85 %)
19.	<i>Leprosy Review</i>	UK	10 (0.78 %)
20.	<i>Signs</i>	USA	10 (0.78 %)
21.	<i>Theory Culture and Society</i>	USA	10 (0.78 %)
22.	Others (188 journals)		651 (50.86 %)
<b>Total</b>			<b>1280</b>

### 5.7 Authorship Pattern of Citations

Authorship pattern has been analysed to determine the percentage of authors in single, two, three and four & above authors. Some of the documents such as newspapers, interviews do not have authors, so they are categorised as not given in the Table 7.

**Table 7. Authorship pattern**

S. No.	Authors	No. of citations (%)
1.	One	4786 (83.94 %)
2.	Two	660 (11.58 %)
3.	Three	103 (1.80 %)
4.	Four & above	153 (2.69 %)
5.	Not given	64 (1.10 %)
<b>Total</b>		<b>5766 (100 %)</b>

It is clear from Table 7 that most of the citations (83.94 %) are to papers which have single authors. This also indicates that in social sciences there is very less collaboration.

### 5.8 Indian Author Citations to Foreign Author Citations Ratio

To explore the distribution of Indian author citations to foreign author's citations the authors were classified into Indian authors and foreign author citations based on the name of the author. The study finds that 65.42 % citations are from foreign authors, while 34.58 % citations are from Indian authors.

**Table 8. Indian-author citations to foreign-author citations ratio**

S. No.	Type of author citations	No. of citations (%)
1.	Indian author citations	1922 (34.58 %)
2.	Foreign author citations	3635 (65.42 %)
<b>Total</b>		<b>5557</b>

So, it can be concluded, that foreign authored citations are more as compare to Indian authors.

## 6. FINDINGS AND CONCLUSIONS

In the present study 5766 citations were analysed from 25 PhD theses in sociology. On the basis of the above study the following conclusions are drawn:

- Highest numbers of citations (67.2 %) were recorded from books followed by journal articles, book chapters, encyclopedias, reports, etc.
- Analysis on distribution of country-wise scattering of citations reveals that Indian literature received (45.9 %) citations and ranked first, followed by USA with 1546 (26.8 %), and UK with 1293 (22.4 %).
- Similar to scattering by country, analysis on scattering by city shows that New Delhi ranked first having 39.9 % citations followed by London with 18.7 %, and New York 14.3 % citations.
- The analysis of authorship pattern in Sociology theses reveals that 83.9 % of citations were to papers written by single authors, which implies that social sciences are less collaborative as compared to science and technology.
- The analysis of citations indicates that most cited authors in the theses are foreign authored 65.4 %, and citations to Indian authors are about 34.6 %.
- In the rank list of journals, India's *Economic & Political Weekly* occupies the first rank accounting for 137 (10.70 %) of total journal citations followed by *Indian Journal of Psychiatry* (7.66 %).

During the study it was found that citations are not in standard format. Researchers have not used any uniform pattern/sequence while citing the research materials. It is observed that somewhere year is missing, somewhere publisher's name and

place. This kind of study will definitely help the libraries in selection of useful sources as there is explosion of information and documents in the form of books and journals. The ranking of journals can be used by librarians and researchers to select the journals of greater importance in a particular subject area.

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