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Citations analysis of LIS theses submitted to Kuvempu University and University of Mysore

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Abstract

A Citation analysis on 8289 citations cited in 59 LIS doctoral theses submitted to Kuvempu University (15 theses) and University of Mysore (44 theses) has been carried out to know the citation pattern. The data was collected using Shodhganga e-theses database. The study found that a total of 6883 journal citations were cited in 59 theses. The journal 'Scientometrics' has been cited 651 times and stands first in the rank list of journals. Annals of Library and Information Studies which is an Indian LIS journal stands in the third position in the rank list with 130 citations. The Bradford's law of scattering is not applicable for this study. The rank list of country-wise journals showed that journals published from USA have highly cited followed by journals published from UK and India.

Keywords: Citation analysis, Bradford's Law, Shodhganga, Kuvempu University, University of Mysore

1. Introduction

The scientific information is communicated via periodicals, conference proceedings, patents, research reports and so on. Among the different medium of communication, journals are the predominant medium of scholarly communication. The scientific community consider journals as the most preferable source to publish nascent research results(Maurseth&Verspagen, 2002; Kushkowski, 2003; Dharani Kumar et al., 2014). At the same time, majority of researchers cite journals in their research works.

A citation analysis of scholarly work shall be carried out to know the trend in citations to journals. Citation Analysis is the examination of the frequency patterns and graphs of citations in scholarly works. Citation is the best available indicator of the use of the previous work. The citation analysis reveals the relationship existing between authors, scholarly works, between fields, or even between countries. A systematic study of citation in a discipline provides a criterion for measuring the degree of interaction among the researchers (Kumar and Reddy, 2012; Banateppanavar et al., 2013).Today most of the libraries are facing problems such as,rising journal subscription cost, shrinking library budget etc. The limited financial resources have caused many problems to the librarian so they are forced to look for solutions for collection development and provide quality document to the user community (Kushkowski, et al., 2003)That is where citation analysis proves to be one of the most essential and needful Study. This study is an attempt to know the citation pattern cited in the theses submitted to Kuvempu University and University of Mysore.

2. Scope of the study

The present study is confined to the analysis of citations cited in fifty nine (59) doctoral theses in the field of Library and Information Science submitted to Kuvempu University (KU) and University of Mysore (UoM). As shown in Shodhganga database, Kuvempu University has

15 theses and University of Mysore has 44 theses. The data collected is confined to 59 theses available in Shodhganga up to March 2018.

3. Objectives of the study

The objectives of the study are as follows:
1. To know the number of theses submitted to Kuvempu University and University of Mysore.
2. To identify the number of journal citations cited in the theses
3. To prepare a ranked list of LIS journals.
4. To verify the results with the Bradford's law of scattering.
5. To identify the highly cited Indian LIS journals.
6. To study the distribution of journals according to the country and citations.

4. Methodology

The present study is confined to the analysis of citations cited in the Ph.D theses accepted the field of Library and Information Science by Kuvempu University and University of Mysore. Shodhganga, Indian Theses Repository was the basis for collecting the data for the study. Shodhganga is a electronic theses database established by a well known library network in India, i.e. INFLIBNET. The University Grants Commission (UGC) of India has mandated that every Indian University need to submit an electronic version of theses to Shodhganga database that are submitted to its departments.

A total of 59 theses submitted to Kuvempu University (14 theses) and University of Mysore (44 theses) were identified in the Shodhganga database. All 59 theses were considered and only the "bibliography" section provided in 59 theses were considered in the study.

The PDF files of the Bibliography of all theses (59 theses) were downloaded from Shodhganga database and saved to local disk. The study has yielded a total of 8289 references of which 6883 were journal citations. All 6883 journal citations were identified and copied in a separate file for further analysis. The study created a list of 950 cited journals and the Bradford Laws of Scattering was applied to the data. Further, "SCR Scientific Journal Rankings – SCImago" was used to know the country of the cited journals.

5. Analysis and Interpretations

The study covered 59 Theses from Kuvempu University (15 theses) and University of Mysore (44 theses) collected from Shodhaganga, an E-theses database. The data has been analysed and presented in the form of tables and graphs to facilitate the interpretation in the following sections.

5.1 Number of Theses and References

Number of theses and references are very significant data in this study. The distribution of number of theses and number of citations are presented in Table-1.

Table-1: Number of Theses and Reference List

Name of the University	No. of Theses	Number of citations	Percentage of Theses
Kuvempu university	15	934	25.42
University of Mysore	44	7355	74.58
Total	**59**	**8289**	**100.00**

Table-1 shows number of theses submitted to the Departments of Library and Information science at Kuvempu University and University of Mysore. The Shodhganga database, shown 15 theses for Kuvempu University that consist of 934 citations and 44 theses for University of Mysore consists 7355 references.

Table 2. Distribution of Total and Journals Citation

Name of the University	Total citations	Journal citation	Percentage
Kuvempu university	934	664	71.09
University of Mysore	7355	6219	84.55
Total	**8289**	**6883**	**83.04**

Table-2 reveals that of the total 8289 citations, 6883 are journal citations that accounted for 83.04%. It is also clear from the above table that the percentage of journal citations for University of Mysore is 84.55% while it is 71.09% for the Kuvempu University theses.

Table-3: Year wise distribution theses as shown in Shodhganga

Year	Number of theses submitted to Kuvempu University	Percentage	Number of theses submitted to University of Mysore	Percentage
1992	-	-	2	4.54
1996	1	6.66	-	-
2003	1	6.66	1	2.27
2004	1	6.66	1	2.27
2007	3	20.00	3	6.81
2008	3	20.00	2	4.54
2009	1	6.66	2	4.54
2010	2	13.33	4	9.09
2011	1	6.66	3	6.81
2013	2	13.33	2	4.54
2014	-	-	7	15.90
2015	-	-	12	27.27
2016	-	-	5	11.36
Total	**15**	**100.00**	**44**	**100.00**

Table-3 shows the total number of theses submitted to Kuvempu University as well as University of Mysore. It is clear from the Table that of the 15 theses submitted to Kuvempu University, 20% of them were submitted in the years 2007 and 2008 which is the highest percentage for all years followed by the years 2010 and 2013 (13.33%). As per University of Mysore is concerned, the highest percentage i.e. 27.27% of theses were submitted in the year 2015 followed by the year 2014 (15.90%).

Table-4: Year wise distribution theses and references of both Universities

SI No.	Years	No. of Theses	References	Percentages
1	1992	2	186	2.24
2	1996	1	88	1.06
3	2003	2	60	0.72
4	2004	2	146	1.76
5	2007	6	1179	14.22
6	2008	3	296	3.57
7	2009	3	335	4.04
8	2010	4	439	5.30
9	2011	5	1097	13.23
10	2012	3	269	3.25
11	2013	4	296	3.57

12	2014	7	1028	12.40
13	2015	12	2195	26.48
14	2016	5	675	8.14
Total		**59**	**8289**	**100.00**

Table-4 shows year-wise distribution of theses and total number of citations both Kuvempu and University of Mysore. It is clear from the above Table-that the highest percentage of citation are found in the year 2015 (26.48%) followed by 2007 (14.22%), 2011 (13.23%), and 2014 (12.40%). Very least number of citations are found in the year 2003 (0.72%) and 1996 (1.06%). It is clear that the theses submitted in recent years have more number of citations than those submitted in early years.

5.2 Style Manuals

An attempt has also been made to know the style manuals followed by the LIS researchers of the two Universities. The data presented in table-5 shows that there are three internationally known Style Manuals have been followed by the LIS researchers belonged to Kuvempu University and University of Mysore.

Table-5: Style Manuals used in theses.

SI.No	Style Manuals	Theses	Percentages
1	APA	52	88.14
2	Chicago	2	3.39
3	MLA	5	8.475
Total		**59**	**100**

Table 5 shows the of the 59 theses, 52 (88.14%) followed APA style in references, and 5 (8.47%) followed MLA style manual and 2 theses (3.39%) followed Chicago style manual. Hence, it is clear that the APA style manuals is the most preferred style manuals among the LIS researchers belonged to KU and UoM.

5.3 Ranking list of Journals

An attempt has been made to create a rank list of cited journals in descending order of citation frequency.

Table-6:Ranking list of Journals

Si no	Rank	Journal name	No. of citation	Cum. citation	Percentage	Cum. Percentage	Country
1	1	Scientometrics	651	651	9.46	9.46	Hungary
2	2	The Electronic Library	216	867	3.14	12.60	United Kingdom
3	3	Annals of Library and Information Studies	130	997	1.89	14.48	India
4	4	DESIDOC Journal of Library and Information Technology	122	1119	1.77	16.26	India
5	5	College and Research Libraries	114	1233	1.66	17.91	USA
6	6	The Journal of Academic Librarianship	112	1345	1.63	19.54	United Kingdom
7	7	Journal of American society for Information science	105	1450	1.53	21.07	USA
8	8	Online Information Review	99	1549	1.44	22.50	United

							Kingdom
9	9	Library hi tech	97	1646	1.41	23.91	United Kingdom
10	9	Library Review	97	1743	1.41	25.32	United Kingdom
11	10	Journal of documentation	94	1837	1.37	26.69	United Kingdom
12	11	SRELS Journals of Information Management	82	1919	1.19	27.88	India
13	12	Library Philosophy and Practices	81	2000	1.18	29.06	Russia
14	13	Library Trends	79	2079	1.15	30.20	USA
15	14	Aslib Proceedings	77	2156	1.12	31.32	United Kingdom
16	15	Program: Library and `Information Systems	76	2232	1.10	32.43	United Kingdom
17	16	Journal of the American Society for Information Science and Technology	75	2307	1.09	33.52	USA
18	17	Library Management	71	2378	1.03	34.55	United Kingdom
19	17	Library Software Review	71	2449	1.03	35.58	USA
20	18	Information Processing management	68	2517	0.99	36.57	Netherlands
21	19	Bulletin of the Medical Library Association	66	2583	0.96	37.53	USA
22	20	Library Science with Slant to Documentation n and Information Studies	65	2648	0.94	38.47	India
23	21	IASLIC Bulletin	64	2712	0.93	39.40	India
24	22	Journal of Information Sciences	62	2774	0.90	40.30	India
25	23	New Library World	58	2832	0.84	41.14	United Kingdom
26	24	Journal of the Medical Library Association	56	2888	0.81	41.96	USA
27	24	Serials Review	56	2944	0.81	42.77	United Kingdom
28	25	The International Information and Library Review	51	2995	0.74	43.51	Netherlands
29	26	Annals of Library Science and Documentation	50	3045	0.73	44.24	India
30	27	Information Research	49	3094	0.71	44.95	United Kingdom
31	27	Library Hi Tech News	49	3143	0.71	45.66	United Kingdom
32	27	The Serials Librarian	49	3192	0.71	46.38	USA
33	28	Library Journal	46	3238	0.67	47.04	United Kingdom
34	29	Information Today	45	3283	0.65	47.70	USA
35	29	International Information and Library Review	45	3328	0.65	48.35	USA
36	29	Journal of Library and Information Sciences	45	3373	0.65	49.00	China
37	30	Collection Management	43	3416	0.62	49.63	United Kingdom
38	30	Herald of Library Science	43	3459	0.62	50.25	India

39	30	ILA Bulletin	43	3502	0.62	50.88	India
40	30	Library Herald	43	3545	0.62	51.50	India
41	31	DLib Magazine	42	3587	0.61	52.11	USA
42	31	Library Quarterly	42	3629	0.61	52.72	USA
43	32	Computers in Libraries	41	3670	0.60	53.32	USA
44	32	Science and Technology Libraries	41	3711	0.60	53.92	USA
45	33	Information Studies	40	3751	0.58	54.50	India
46	34	Library and Information Science Research	38	3789	0.55	55.05	United Kingdom
47	34	The Grey Journal	38	3827	0.55	55.60	Netherlands
48	35	Current Science	37	3864	0.54	56.14	India
49	36	Health Information and Libraries Journals	36	3900	0.52	56.66	USA
50	36	Learned Publishing	36	3936	0.52	57.18	USA
51	37	Library Collections Acquisitions and Technical Services	35	3971	0.51	57.69	Netherlands
52	38	Collection Building	34	4005	0.49	58.19	United Kingdom
53	39	Journal of Librarianship and Information Science	33	4038	0.48	58.67	USA
54	39	Reference Services Review	33	4071	0.48	59.15	United Kingdom
55	40	IFLA Journal	32	4103	0.46	59.61	United Kingdom
56	40	Libra: International Journal of Libraries and Information Services	32	4135	0.46	60.08	Germany
57	41	Information Technology and Libraries	31	4166	0.45	60.53	USA
58	42	Interlending Document supply	30	4196	0.44	60.96	United Kingdom
59	43	Journal of library administration	28	4224	0.41	61.37	United Kingdom
60	43	Malaysian Journal of Library and Information Science	28	4252	0.41	61.78	Malaysian
61	43	Science	28	4280	0.41	62.18	USA
62	43	The Indian Journal of Technical Education	28	4308	0.41	62.59	India
63	44	Electronic Library & Information Systems	27	4335	0.39	62.98	United Kingdom
64	45	Information services and use	25	4360	0.36	63.34	Netherlands
65	45	journals of Library technology reports	25	4385	0.36	63.71	USA
66	46	ONLINE	24	4409	0.35	64.06	USA
67	47	Technical Services Quarterly	23	4432	0.33	64.39	USA
68	48	Library Resources and Technical Services	22	4454	0.32	64.71	USA
69	49	Information Development	21	4475	0.31	65.02	USA
70	49	OCLC Systems and Services	21	4496	0.31	65.32	United Kingdom
71	49	Portal: Libraries and the Academy	21	4517	0.31	65.63	USA
72	50	College and Research Libraries News	20	4537	0.29	65.92	United Kingdom
73	50	Nature	20	4557	0.29	66.21	United Kingdom
74	50	Social Science information studies	20	4577	0.29	66.50	United Kingdom

75	51	African Journal of Library: Archives and Information Science	19	4596	0.28	66.77	Nigeria
76	51	Research Policy	19	4615	0.28	67.05	Netherland
77	52	Against the Grain	18	4633	0.26	67.31	USA
78	52	DESlDOC Bulletin of Information Technology	18	4651	0.26	67.57	India
79	52	International Library Review	18	4669	0.26	67.83	USA
80	52	VINE: The Journal of Information & Knowledge Management Systems 37 (3)	18	4687	0.26	68.10	United Kingdom
81	53	Drexel Library Quarterly	16	4703	0.23	68.33	USA
82	53	Library & Information Science Research	16	4719	0.23	68.56	Netherlands
83	54	American Libraries	15	4734	0.22	68.78	USA
84	54	Journal of Education for Library and Information Science	15	4749	0.22	69.00	USA
85	54	Librarian Career Development	15	4764	0.22	69.21	USA
86	54	Publishing Research Quarterly	15	4779	0.22	69.43	Netherlands
87	54	Research Evaluation	15	4794	0.22	69.65	United Kingdom
88	54	South African Journal of Library and Information Science	15	4809	0.22	69.87	South Africa
89	54	University News	15	4824	0.22	70.09	India
90	55	Australian Academic& Research Libraries	14	4838	0.20	70.29	Australia
91	55	Journal of Electronic Resources in Medical Libraries;	14	4852	0.20	70.49	United Kingdom
92	55	Library Computing	14	4866	0.20	70.70	USA
93	55	Lucknow librarian	14	4880	0.20	70.90	India
94	55	Webology	14	4894	0.20	71.10	Iran
95	56	Internet Reference Services Quarterly	13	4907	0.19	71.29	USA
96	56	Education for Information	13	4920	0.19	71.48	Netherlands
97	56	International Forum on Information and Documentation;	13	4933	0.19	71.67	Netherlands
98	56	Social Studies of Science	13	4946	0.19	71.86	USA
99	56	Wilson Library Bulletin	13	4959	0.19	72.05	USA
100	57	Annals of Library and Information Science	12	4971	0.17	72.22	India
101	57	Association of Thailand	12	4983	0.17	72.40	Thailand
102	57	Cataloguing and Classification Quarterly	12	4995	0.17	72.57	United Kingdom
103	57	Evidenced Based Library and Information Practice	12	5007	0.17	72.74	Canada
104	57	Medical Reference Services Quarterly	12	5019	0.17	72.92	United Kingdom
105	57	PNLA Quarterly	12	5031	0.17	73.09	USA
106	58	Electronic Journal of Academic and Special Librarianship	11	5042	0.16	73.25	Canada
107	58	Government Publications Review	11	5053	0.16	73.41	USA
108	58	Information Storage and Retrieval	11	5064	0.16	73.57	United Kingdom
109	58	Journal of Information Management SYSTEM	11	5075	0.16	73.73	USA
110	58	Library Progress (International	11	5086	0.16	73.89	India

111	58	Reference Librarian	11	5097	0.16	74.05	USA
112	58	Serials	11	5108	0.16	74.21	Netherlands
113	58	special Libraries	11	5119	0.16	74.37	USA
114	59	American Documentation	10	5129	0.15	74.52	USA
115	59	Australian Library Journal	10	5139	0.15	74.66	Australia
116	59	Communications of the ACM	10	5149	0.15	74.81	USA
117	59	Information Technologist	10	5159	0.15	74.95	Nigeria
118	59	Issues in Science and Technology Librarianship	10	5169	0.15	75.10	USA
119	59	Library and Information Research News	10	5179	0.15	75.24	United Kingdom
120	59	Pearl: A Journal of Library and Information Science	10	5189	0.15	75.39	India
121	59	Tech News	10	5199	0.15	75.53	USA
122	60	Bulletin Des Bibliotheques De France	9	5208	0.13	75.66	France
123	60	Bulletin of the Library Association of China	9	5217	0.13	75.80	China
124	60	International Journal of Information dissemination and Technology	9	5226	0.13	75.93	India
125	60	Journal of Communication	9	5235	0.13	76.06	USA
126	60	Journal of Educational Media and Library Sciences	9	5244	0.13	76.19	China
127	60	Journal of Information Processing and Management	9	5253	0.13	76.32	South Korea
128	60	Liber Quarterly: The Journal of European Research Libraries	9	5262	0.13	76.45	Germany
129	60	RBM: A Journal of Rare Books Manuscripts and Cultural Heritage	9	5271	0.13	76.58	USA
130	60	The Acquisitions Librarian	9	5280	0.13	76.71	USA
131	60	The Bottom Line: managing Library Finances	9	5289	0.13	76.84	USA
132	60	Timeless fellowship	9	5298	0.13	76.97	India
133	60	Trends in Information Management	9	5307	0.13	77.10	India
134	61	Ariadne: A Web & Print Magazine of Internet Issues for Librarians & Information Specialists	8	5315	0.12	77.22	United Kingdom
135	61	Bulletin AIB	8	5323	0.12	77.34	USA
136	61	First Monday	8	5331	0.12	77.45	USA
137	61	Indian Journal of Information Library and Society	8	5339	0.12	77.57	India
138	61	INSPEL	8	5347	0.12	77.68	Germany
139	61	International Journal of Information Management	8	5355	0.12	77.80	United Kingdom
140	61	Journal of Medical Library and Information Science	8	5363	0.12	77.92	USA
141	61	Journal of Scientometric Research	8	5371	0.12	78.03	India
142	61	Pakistan Library and Information Science Journal	8	5379	0.12	78.15	Pakistan
143	61	Reference and User Services Quarterly	8	5387	0.12	78.27	USA
144	61	Social Networks	8	5395	0.12	78.38	Netherlands
145	61	World Digital Libraries An International Journal	8	5403	0.12	78.50	India
146	62	Behavioural and Social Sciences Librarian	7	5410	0.10	78.60	USA

147	62	Information outlook	7	5417	0.10	78.70	USA
148	62	International Journal of Library and Information Science	7	5424	0.10	78.80	Kenya
149	62	Journal of Electronic Resources Librarianship	7	5431	0.10	78.90	USA
150	62	Journal of Information Science and Technology Association (Joho No Kagaku To Gijutsu)	7	5438	0.10	79.01	Japan
151	62	Knjiznica	7	5445	0.10	79.11	Croatia
152	62	Technical communication	7	5452	0.10	79.21	USA
153	62	The Journal of Electronic Publishing	7	5459	0.10	79.31	USA
154	62	Total Quality Management	7	5466	0.10	79.41	United Kingdom
155	62	University of Dar es Salaam Library Journal	7	5473	0.10	79.51	USA
156	63	Annual Review of Information Science and Technology	6	5479	0.09	79.60	USA
157	63	British Medical Journal	6	5485	0.09	79.69	United Kingdom
158	63	Bulletin of Library and Information Science	6	5491	0.09	79.78	USA
159	63	Campus wide Information Systems	6	5497	0.09	79.86	United Kingdom
160	63	Chinese Librarianship: An International Electronic Journal	6	5503	0.09	79.95	China
161	63	Citatel'	6	5509	0.09	80.04	Netherlands
162	63	Current contents	6	5515	0.09	80.12	USA
163	63	Feliciter	6	5521	0.09	80.21	Canada
164	63	Genome Biology	6	5527	0.09	80.30	United Kingdom
165	63	Information today and tomorrow	6	5533	0.09	80.39	USA
166	63	Journal of Library Automation	6	5539	0.09	80.47	USA
167	63	Journal of Web Librarianship	6	5545	0.09	80.56	USA
168	63	Kelpro Bulletin	6	5551	0.09	80.65	India
169	63	Libraries & Culture	6	5557	0.09	80.74	USA
170	63	Show me Libraries	6	5563	0.09	80.82	USA
171	63	UNESCO bulletin for libraries	6	5569	0.09	80.91	France
172	64	Bibliotheca Medica Canadian	5	5574	0.07	80.98	Canada
173	64	BMC Medical Informatics and Decision Making	5	5579	0.07	81.05	United Kingdom
174	64	Bulletin of the American Society for Information Science and Technology	5	5584	0.07	81.13	USA
175	64	Canadian Library Journal	5	5589	0.07	81.20	Canada
176	64	Engineering Magazine	5	5594	0.07	81.27	Russia
177	64	Health Education Research	5	5599	0.07	81.35	United Kingdom
178	64	Indian Librarian	5	5604	0.07	81.42	India
179	64	Journal of Advances in Library and Information Science	5	5609	0.07	81.49	India
180	64	Journal of Electronic Publishing	5	5614	0.07	81.56	USA
181	64	Journal of Hospital Librarianship	5	5619	0.07	81.64	United state
182	64	Journal of Scholarly Publishing	5	5624	0.07	81.71	Canada
183	64	New Zealand Libraries	5	5629	0.07	81.78	New Zealand

184	64	Professional de la information	5	5634	0.07	81.85	USA
185	64	Public Library Quarterly	5	5639	0.07	81.93	USA
186	64	Resource Sharing and Information Networks	5	5644	0.07	82.00	USA
187	64	School Library Journal	5	5649	0.07	82.07	USA
188	64	Scientific American	5	5654	0.07	82.14	USA
189	64	Signum	5	5659	0.07	82.22	Finland
190	64	Turkish Librarianship	5	5664	0.07	82.29	Turkey
191	65	48 journals with 4 citation	192	5856	2.79	85.08	
192	66	64 Journals with 3 citation	192	6048	2.79	87.87	
193	67	187 Journals with 2 citation	374	6422	5.43	93.30	
194	68	461 journal with 1 citation	461	6883	6.70	100.00	
		Total	950				

Table-6 provides an overall rank list of journals. It is found that *Scientometrics* published from Hungary occupies the first rank as the most preferred journal and has been cited 651 (9.46%) times. Similarly, other top nine journals in the rank are Viz. The Electronic Library (United Kingdom) with 216 citations (3.14%) and Annals of library and Information Studies (India) with 130 citations (1.8%), DESIDOC journal of library and information Technology (India) with 122 citations (1.77%), College And Research library from USA with 114 citations (1.66%), The journal of Academic librarianship (Unite State) with 112 citations (1.63%).Journals of American Society for information Science (USAs) with 105 citations (1.53%), Online Library review (United Kingdom) with 99 citations (1.44%), and Library Hi Tech and Library Review with 97 citations (1.41%).

5.4 Bradford law of scattering

Bradford's Law serves as a general guideline to librarians in determining the number of core journals in any given field. His law says journals in a single field can be divided into *three* parts, each containing the same number of articles. The mathematical relationship of the number of journals in the core to the first zone is a constant 'n' and the second zone of relationship is n^2. Bradford expressed this relationship as 1: n: n2

Table-7: Distribution of Bradford Zones

Zone	Total no. of citations	Cum. no. of Articles	No. of journals	Percentage
1	2307	2307	17	1.79
2	2270	4577	57	6.00
3	2306	6883	876	92.21
Total	**6883**		**950**	**100.00**

Table-7 indicates the three zones of journals preferred to publish research articles on *Econometrics.* The first zone contains 17 journals and second zone contains 57 journals. Meanwhile, the Bradford's multiplier is 3.35. Accordingly, the third zone need to have approximately 191 journals. In this case, the distribution is 17:57:876. Hence, the data does not follow the Bradford's law of scattering.
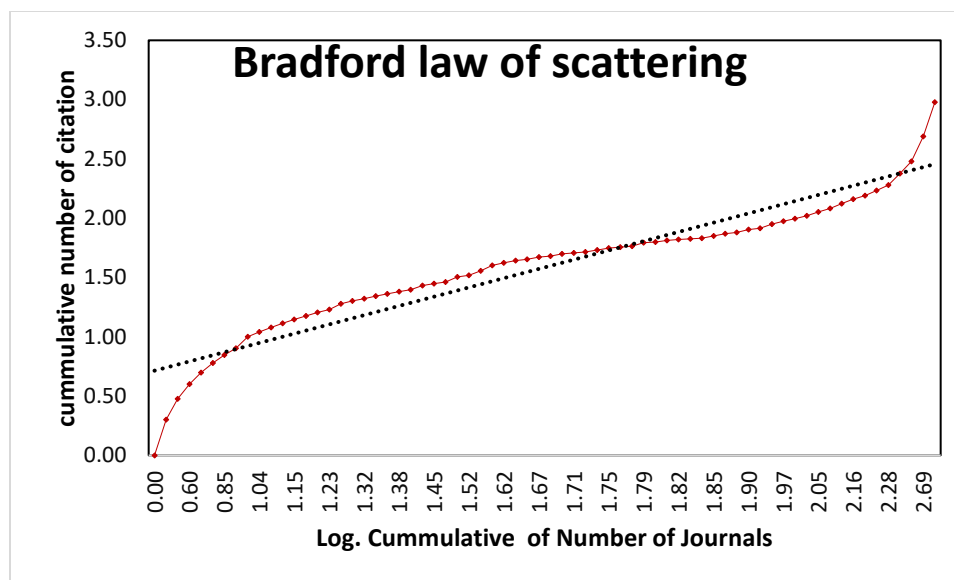
Figure 1: Bradford Graphs

5.5 *Ranking list of Indian Journals*

The rank list of cited Indian LIS journals is presented in table-10.

Table-8: Ranking list of Indian LIS journals

SI No	Rank	Journal name	Publisher Name	Citation	Cum. Citation	Percentage	Cum. citation
1	1	Annals of Library and Information Studies	NISCAIR	192	192	18.75	18.75
2	2	DESIDOC Journal of Library and Information Technology	DESIDOC	144	336	14.06	32.81
3	3	SRELS Journals of Information Management	Sarada Ranganathan Endowment for library science	82	418	8.01	40.82
4	5	Library Science with Slant to Documentation and Information Studies	Sarada Ranganathan Endowment for library science, Bangalore	65	483	6.35	47.17
5	6	IASLIC Bulletin	IASLIC,	64	547	6.25	53.42
6	7	Journal of Information Sciences	Arun Publication house	62	609	6.05	59.47
7	8	ILA Bulletin	Indian Library association	43	652	4.20	63.67
8	8	Library Herald	Journal of Delhi Library Association	43	695	4.20	67.87

9	8	Herald of Library Science	Varanasi Hindu University	43	738	4.20	72.07
10	9	Information Studies	Ranganathan Centre For Information Studies	40	778	3.91	75.98
11	10	Current Science	Current Science Association	37	815	3.61	79.59
12	11	The Indian Journal of Technical Education	Indian Society For Technical Education	28	843	2.73	82.32
14	12	University News	Association of Indian Universities	15	858	1.46	83.79
15	13	Lucknow librarian	Uttar Pradesh library Association,Lacknow	14	872	1.37	85.16
16	14	Library Progress International	Bulletin of Pure and Applied science Publication, Delhi	11	883	1.07	86.23
17	15	Pearl: A Journal of Library and Information Science	University Library Teacher's Association of Andhra Pradesh,	10	893	0.98	87.21
18	16	International Journal of Information dissemination and Technology	M.M. University	9	902	0.88	88.09
19	16	Timeless fellowship	Karnataka University. Library. School of Library Science.	9	911	0.88	88.96
20	16	Trends in Information Management	Department of Library and Information Science,	9	920	0.88	89.84
21	17	World Digital Libraries An International Journal	The Energy and Resources Institute	8	928	0.78	90.63
22	17	Journal of Scientometric Research	Medknow Publications and Media, Walters Kluwer	8	936	0.78	91.41
23	17	Indian Journal of Information Library and Society	Bharathi publication	8	944	0.78	92.19

24	18	Kelpro Bulletin	Kerala Library Professionals Organisation	6	950	0.59	92.77
25	19	Journal of Advances in Library and Information Science	Cloud Publications	5	955	0.49	93.26
26	19	Indian Librarian	Sant Ram Bhatia,	5	960	0.49	93.75
27	20	International Library Movement	Indian Library Movement,	4	964	0.39	94.14
28	20	Journal of Intellectual Property Rights	NISCAIR	4	968	0.39	94.53
30	21	Indian Journal of History of Science	National Institute of Sciences of India,	3	971	0.29	94.82
31	21	International Journal of Information Library and Society	Publishing India Group	3	974	0.29	95.12
32	22	Indian Journal of Agricultural Library Information Science	Association of agricultural librarians and documentalist of India	2	976	0.20	95.31
33	22	ICMR Library Bulletin	Chand for the Indian Council of Medical Research	2	978	0.20	95.51
34	22	Indian Journal of Library and Information Science	Red Flower Publication Pvt. Ltd	2	980	0.20	95.70
35	22	Indian Economic Journal	Indian Economic Association	2	982	0.20	95.90
37	22	International Journal of Digital Library service	Geethanjali Research Publication	2	984	0.20	96.09
38	22	International Research: Journal of Library and Information Science	Aligarh : Dept. of Library and information Science, Aligarh Muslim University	2	986	0.20	96.29
39	22	Journal of Library Information and Communication Technology	-	2	988	0.20	96.48
40	22	National Academy of sciences latter	National Academy of science	2	990	0.20	96.68
41	22	The journal of legal awareness	Integrate School of Law, Ghaziabad	2	992	0.20	96.88

| 42 | 22 | Calicut medical journal | CMC Alumni Association, Calcatta | 2 | 994 | 0.20 | 97.07 |
| | | 30 journals with 1 citation | | 30 | 1024 | 2.93 | 100.00 |

Table-8 shows that *Annals of Library and Information Studies* published by NISCAIR occupies the first rank as the most preferred journal and has been cited 192 (18.75%) times. It is followed by *DESIDOC Journal of Library and Information Technology* with 144 citations (14.06%), *SRELS Journals of Information Management* with 82 citations (8.01%), *Library Science with Slant to Documentation and Information Studies* with 65 citations (6.35%), *IASLIC Bulletin* with 64 citations (6.25%), and *Journal of Information Sciences* with 62 citations (6.05%). Hence, ALIS and DESIDOC journals cumulatively cover more than thirty percent of total citations.

5.6 Country–wise Distribution of Journals and Citation

Table-9: Country –wise distribution of journals and citations

SI NO.	Rank	Country	No of Journals	No of citations	percentage ofjournal	Percentages of citation
1	1	USA	415	2158	43.68	31.4
2	2	United Kingdom	225	1991	23.68	28.9
3	3	India	75	1026	7.895	14.9
4	4	Netherland	41	360	4.316	5.23
5	5	Canada	33	79	3.474	1.15
6	6	Germany	19	82	2.00	1.19
7	7	Australia	14	43	1.474	0.62
8	8	France	11	34	1.158	0.49
9	9	china	8	31	0.842	0.45
10	9	Nigeria	8	37	0.842	0.54
11	10	Pakistan	7	15	0.737	0.22
12	11	Iran	6	25	0.632	0.36
13	11	Japan	6	16	0.632	0.23
14	11	Russia	6	92	0.632	1.34
15	12	Hungary	5	656	0.526	9.53
16	12	Turkey	5	9	0.526	0.13
17	13	Brazil	4	7	0.421	0.1
18	13	Denmark	4	6	0.421	0.09
19	13	South Africa	4	22	0.421	0.32
20	13	Taiwan	4	49	0.421	0.71
21	14	Other countries	50	145	5.263	2.11
		Total	**950**	**6883**	**100.00**	**100.00**

The above Table shows that out of the 950 journals and 6883 citation from Theses of Kuvempu and University of Mysore. The country wise analysis of most cited journals indicate that of the 950 journals, 415 (43.68) journals are published from USA which occupies the top position followed by the 225 journals from United Kingdom (23.68), and the third place in the list is occupied by Indian journals (75 journals and 7.89%). Cumulatively journals from USA and UK received more than 60% of citations.

6. Discussion and Conclusion

The study found that the number of citations in LIS theses have been growing by time. Hence, it is clear that the LIS researchers have access to voluminous resources and have been citing more information resources in research works. At this time, the role of librarians is significantly challenging in the identification of need based scholarly information. Libraries need to find and acquire the collection that is qualitative as well as quantitative. Therefore, the studies on citations in LIS field show the way to identify the most frequently used information resources as well as the sources on which the users show interest. Thereby the libraries can build a core library collection with regard to LIS research.

The study also found that the LIS journals published from USA have been highly cited followed by journals published from UK and India. Even though the number of Indian LIS journals is more, the citations to them are less. In order to increase the number citations to Indian LIS journals, the publishers need to focus on quality issues, global reachability, and integration of reference management techniques. The quality can be achieved by accepting more number of novel research works and decreasing or nullifying the plagiarism. It is a known fact that many International publishers provide links to full-text documents to the cited references via CrossRef, Google Scholar etc. Similar initiatives need to be taken by Indian LIS journal publishers to provide the increased accessibility to the citation cited in Indian LIS journal articles.

The citation analysis evaluates the needs of users and use of information sources in the scholarly communication. The citation studies also help in monitoring budget allocation, collection development, especially, journal selection process.

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