

# Doctoral Research in Economics: A Study of Doctoral Theses Citations at the Bangalore University

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**Abstract** - 17291 citations from 130 thesis in the doctoral dissertations submitted between 1984-2014 in the Department of Economics, Bangalore University were analysed for identifying their document types, authorship pattern, ranking of cited journals and subject wise distribution of citations. The finding reveals that nearly (60.9%) citations were from journals and books. The subject wise distribution of theses reveals that maximum thesis belongs to Micro Economics (58.46%). India, USA and UK contribute 5691 (94.68%) of total citations. The authorship pattern study reveals that the highest number of journal citations from Single authors around (70.89%) percent of total journal citations.

**Keywords:** Economics Thesis, Doctoral Research, Economics Research, Authorship Pattern, Core Journals, Bangalore University

## I. INTRODUCTION

Research is an inventive movement aiming at realizing insights whether it is science and technology or arts / Social Science. It arises a curiosity or sheer necessity. Similarly, Citation analysis is considered as an active area of Bibliometrics research. Citation Analysis is a study dealing with the quantification of written communication, which helps in the measurement patterns of all forms of published knowledge. It is a technique are being used for a variety of purposes like determination of various scientific indicators, evaluation of scientific output, selection of journals for libraries and even forecasting the potential of a particular field. Citation analysis throws light on the pattern of growth of literature, inter-relationship among different branches of knowledge, productivity, authorship pattern and degree of collaboration, pattern of collection building, and their use. The main aim of citation analysis is to guide the users in locating the exact information for their subject discipline.

Academic libraries particularly the university libraries are constantly under pressure to manage funds effectively and in a consistent manner with teaching and research needs. Analysis of dissertation and thesis reference lists is one approach used to measure library use by graduate students, who are traditionally frequent and heavy library users. In general dissertations are considered as “valuable road signs” to the literature of a discipline (Cox, 2008). This study is very essential for librarian to determine collection development policies which will make maximum use of

money and space which meeting the varied needs of the users. Agriculture was the back bone to the Indian economy in the past century. Nowadays our country is standing in the frontline and its moving towards global economy and considered as developing country. Now the greater number of researches are in science and technology, economics, business, industrial activities is flourishing and in most of the Indian universities awareness in research activities are reported. In turn it becomes necessary now to know the trends in Economics research and development made in this filed. This further gives an idea for conducting a research. This study is such an attempt towards understanding the information use pattern of researchers of Economics at Bangalore University based on a citation analysis Study of their doctoral dissertations.

## II. REVIEW OF LITERATURE

Several citation studies have already been conducted in different subject areas. It is one of the popular methods employed for identification of core documents and complex relationship between citing and cited documents for a particular scientific community in a geographical proximity. Some of the earlier studies referred for this study they are:

Buttlar (1999) in his citation analysis study of 61 LIS dissertations he found that about 80% of the citations were from single authors. He also identified that journal articles were highly cited by researchers than books, book chapters, proceedings, theses, and other print resources. College & Research Libraries and Journal of the American Society for Information Science were the most referred journals. Over half of the works cited were published and originated from USA and UK.

Veerabasavaiah (2011) did citation analysis of doctoral dissertations submitted to Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar. 2392 citations from 21 doctoral dissertations studied. His study reveals that journals are the most preferred sources of information used by the researchers. Accounting 1676, (70.06%) of total citations. The journal poultry science has ranked the highest 532, citations accounting to (31.74%) of the total journal citations.

Thanuskodi, S. (2012) he analysed 19735 citations in the doctoral dissertations submitted between 1990-2010 in the Department of Botany, Annamalai University. The find that (69.09%) of citations were from journals and (14%) from books. USA, UK and India contribute 9062 (45.91%) of total citations. The authorship pattern study reveals that the highest number of journal citations from multi authors around (74.24%) percent of total journal citations

Angamma and Jayatissa (2015), they analysed 4901 of 70 LIS theses submitted to the University of Colombo and University of Kelaniya. Finding's shows that books were the most used documents, with 1921 (39%) of citations and journals with 1664 (34%) of citations, among the ranking of the journal "College and Research Libraries" ranks top in the core list with 66 (3.97%) citations. "Library News" stands second place with 52 citations.

Veerabasavaiah and Muthuraja (2016) in their paper Research trends in doctoral research in economics they studied Year Wise submission of Doctoral thesis, Decade wise, Subject Wise, Guide Wise, and Gender Wise distribution.

Jayalaxmi and Bankapur (2017), they identified 7499 citations from 36 theses of Crop Physiology Submitted to University of Agricultural Science, Dharwad and analyzed according to bibliographic form-wise distribution, chronological distribution, geographic distribution and ranking of journals. They find that journals are more cited documents with 5667 (75.58%) citations than other forms of citations. Multiple authorship contributions were more than single-author contribution.

Mondal and Roy (2018), they analysed 20 doctoral theses in Mathematics subject awarded from university of Burdwan during 2005-2012. They find that journals are highest 1284 (64.18%) citations, Textbooks with 663 (33.04%), conference proceedings with 34 (1.69%). 'Journal of Fluid Mechanics' with 46 citations (3.57%), followed by 'European Journal of operation research' with 42 citations (3.26%) cited more and journals published from USA (37.12%), followed by UK (18.84%) preferred by the most of the researchers.

### III. SCOPE, PURPOSE AND LIMITATIONS OF THE STUDY

The scope and purpose of the present research is to study and investigate the use and usage pattern of literature as revealed through the citation analysis of the doctoral dissertations submitted between 1984 to 2014 in the Department of Economics, Bangalore University.

### IV. OBJECTIVES OF THE STUDY

The objectives of the study are to

1. To know the number of thesis.

2. To know the distribution of citations in different bibliographic forms.
3. To examine the subject wise break up of Theses.
4. To know the geographic-wise scattering of citations.
5. To examine the authorship pattern.
6. To identify the top core journals.

### V. METHODOLOGY AND SAMPLE

References from 130 doctoral thesis in the Department of economics, Bangalore University till 2014 were consulted. A total of 17291 citations were collected averaging 133.01 citations per thesis. Citations belonging to journals, books, conferences, dissertations, reports, reference books, monographs, standards, patents, newspapers and unpublished citations were recorded and studied by bibliometric analysis. Further, Ulrich's periodicals directory and SCImago Journal Rank (SJR) indicator used to knowing the country and the subject of the cited journals. The data was tabulated in Microsoft Excel data sheets, and analysed.

### VI. DATA ANALYSIS RESULTS AND DISCUSSION

Data analysis is the foremost step in research process. It is the link between basic raw data and significant results leading to the final conclusions. This process of data analysis has to be result oriented.

TABLE I DISTRIBUTION OF ECONOMICS DOCTORAL THESIS AND CITATIONS (DECADE WISE)

Sl. No.	Year	Total Thesis	Percentage
1	1984-1994	23	17.69
2	1995-2004	45	34.62
3	2005-2014	62	47.69
Total		130	100

Data analysis in Table I shows the Decade wise submission of doctoral thesis and its citations in Dept. of economics. It is found that total 130 thesis submitted a total 17291 citations were appended in all thesis. Maximum number of thesis 62 (47.69%) found in 2005-2014 followed by 45 (34.62%) between 1995-2004 and 23 (17.69%) between 1984-1994.

TABLE II SUBJECT WISE DISTRIBUTION OF CITATIONS

Sl. No.	Subject	No. of Thesis	%
1	Micro Economics	74	56.92
2	Macro Economics	56	43.08
Total		130	100.00

With the help of subject expert's doctoral thesis submitted in Economics is grouped in to two subject groups as Micro Economics and Macro Economics. From the table II analysis of data it indicates that maximum 74(56.92%) of thesis submitted in the subject of Micro economics and 56 (43.08%) in Macro Economics.

TABLE III JOURNALS AND BOOKS V/S OTHER BIBLIOGRAPHICAL FORMS OF RESOURCES

Sl.No.	Bibliographic Form of documents	No. of Citations	%
1	Journals & Books	10533	60.9
2	Other Bibliographical forms	6758	39.1
	Total	17291	100.0

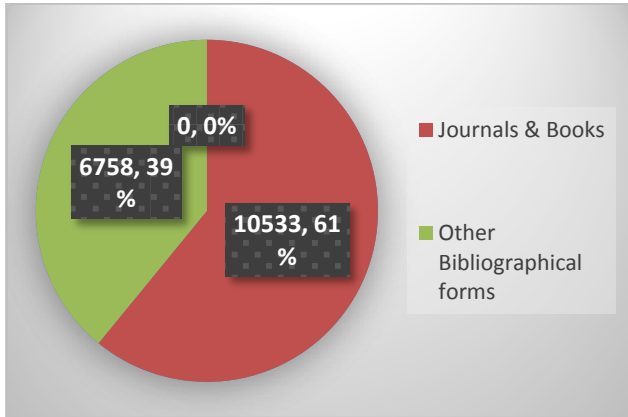


Fig.1 Journals and Books V/S other Bibliographical Forms of Resources

Analysis of data in the Table III indicates the Bibliographical Forms of Resources which is cited by doctoral research students of economics. It shows maximum citations are from journals and books 10533 citations with (60.9%) and other bibliographical forms citations 758 with (39.1%).

TABLE IV BIBLIOGRAPHIC FORM WISE DISTRIBUTION OF CITATIONS

Sl. No.	Bibliographic Form of documents	No. of Citations	%
1	Journal articles	6011	34.76
2	Text Books	4522	26.15
<b>Other Bibliographical Forms of Resources</b>			
1	Reports	3841	22.21
2	Newspapers/Magazines	916	5.3
3	Conferences/Seminars/symposia/workshops	591	3.42
4	working papers/occasional papers/discussion papers	399	2.31
5	Thesis and Dissertations	381	2.2
6	E-resources	231	1.34
7	Reference Sources (Dictionaries/Encyclopaedias/Year books/Hand book and Monographs)	168	0.97
8	News Letters and Bulletin	148	0.86
9	Incomplete references	72	0.42
10	Abstracts	11	0.06
	Total	17291	100

Analysis of data in Table IV shows the Bibliographical Forms of Resources in detail. It shows that most cited resources 6011 (34.76%) are journal citations by researchers, Textbooks with 4522 (26.15%) citations, Reports cited with 3841 (22.21%). Newspapers/Magazines with 916 (5.30%), Conferences/ Seminars/ symposia/workshops with 591 (3.42%), Working papers/discussion papers 399 (2.31%) Thesis and Dissertations with 381 (2.20%), E-resources 231 (1.34%), Reference Sources 168 (0.97%), News Letters and Bulletin 148 (0.86%), Abstracting periodicals 11 (0.06%).

TABLE V COUNTRY-WISE PUBLICATION OF RANKED CORE PERIODICALS CITATIONS

Sl. No.	Place of Publication	No. of Citations	%
1	India	3773	62.77
2	USA	1114	18.53
3	UK	804	13.38
4	Netherlands	65	1.08
5	Germany	36	0.60
6	Australia	27	0.45
7	Switzerland	73	1.21
8	Pakistan	15	0.25
9	Italy	22	0.37
10	Other countries	82	1.36
Total		6011	100

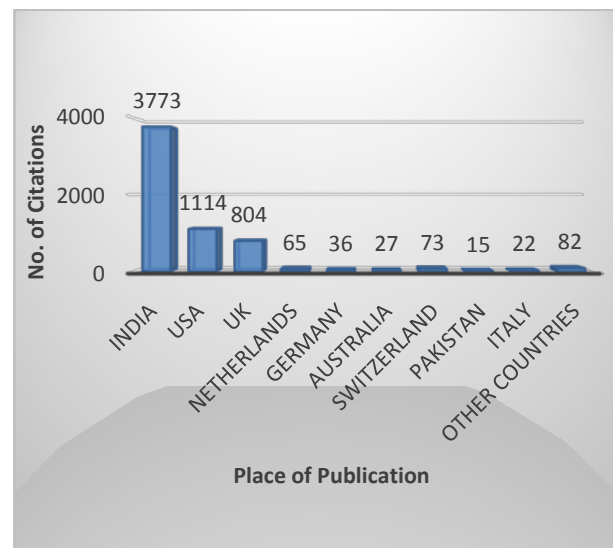


Fig.2 Country-wise publication of ranked core periodicals citations

It is evident from table V that India with 3773 citations (62.77%), USA with 1114 citations (18.53%), UK with 804 citations (13.38%), Netherlands with 65 citations (1.08%), Germany with 36 citations (0.60%) and Australia with 27 citations (0.45%), Switzerland with 73 (1.21%), Pakistan with 15 citations (0.25%) Italy with 22 citations (0.37%) and other countries with 82 citations (1.36%).

TABLE VI AUTHORSHIP PATTERN OF RELATED CORE PERIODICALS

Sl. No.	No. of Authors	No. of citations	%	No. of Journals	%
1	Single Author	4261	70.89	419	63.68
2	Multi authors	1750	29.11	239	36.32
	Total	6011	100.00	658	100.00

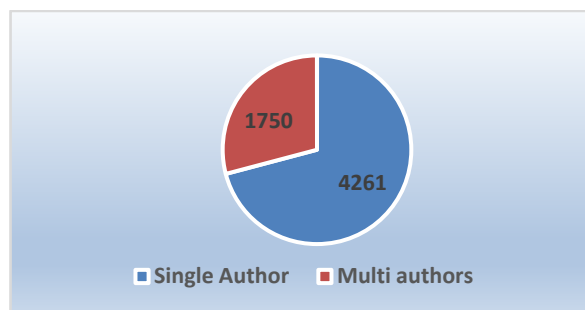


Fig. 3 Authorship Pattern of related core periodicals

It is clear from Table VI that single author with 4261 citations and (70.89%) are maximum percentage and Multi authors with 1750 citations and (29.11%) in journals.

Rank list of the core journals consulted by doctoral research students in economics has been prepared on the basis of total citation frequency received by each journal. The titles have been arranged in decreasing order of the number of citations.

Rank list of the core journals consulted by doctoral research students in economics has been prepared on the basis of total citation frequency received by each journal. The titles have been arranged in decreasing order of the number of citations. It is given in the Table VII with their rank and percentage of citations of contribution. The rest of the journals having less than 9 citations (1189) are given as the last rank as single group.

TABLE VII RANK LIST OF CITED CORE PERIODICALS

Sl. No.	Rank No.	Name of Journals	No. of Citations	%	Cum. Citations	Cum. %
1	1	Economic and Political Weekly	1053	17.5	1053	17.52
2	2	Indian Journal of Agricultural Economics	522	8.68	1575	26.2
3	3	Southern Economist	153	2.55	1728	28.75
4	4	American Economic Review	137	2.28	1865	31.03
5	5	Agricultural Situation in India	130	2.16	1995	33.19
6	6	American Journal of Agricultural Economics	124	2.06	2119	35.25
7	7	World Development	122	2.03	2241	37.28
8	8	Indian Journal of Labour Economics	119	1.98	2360	39.26
9	9	Journal of Political Economy	86	1.43	2446	40.69
10	10	Indian Economic Journal	84	1.4	2530	42.09
11	11	Indian Cooperative Review	76	1.26	2606	43.35
12	11	Indian Silk	76	1.26	2682	44.62
13	12	Economic Journal	73	1.21	2755	45.83
14	13	Indian Journal of Industrial Relations	65	1.08	2820	46.91
15	14	Review of Economics and Statistics	64	1.06	2884	47.98
16	15	International Labour Review	63	1.05	2947	49.03
17	16	Journal of Rural Development	60	1	3007	50.02
18	17	Khadi gramodyog	59	0.98	3066	51.01
19	18	Journal of Development studies	56	0.93	3122	51.94
20	19	Indian Economic Review	55	0.91	3177	52.85
21	20	ArthaVijnana	54	0.9	3231	53.75
22	21	Economic Development and Cultural Change	53	0.88	3284	54.63
23	21	Indian Forester	53	0.88	3337	55.51
24	22	Energy policy	49	0.82	3386	56.33
25	23	IMF Staff Papers	48	0.8	3434	57.13
26	24	Energy for sustainable development	43	0.72	3477	57.84

27	25	Journal of Development Economics	42	0.7	3519	58.54
28	26	The Cooperator	41	0.68	3560	59.22
29	27	International Journal of Social Welfare	40	0.67	3600	59.89
30	28	Oxford Economic Papers	38	0.63	3638	60.52
31	29	Public Finance Review	37	0.62	3675	61.14
32	30	Journal of Farm Economics	35	0.58	3710	61.72
33	31	Productivity	33	0.55	3743	62.27
34	32	Manpower Journal	30	0.5	3773	62.77
35	32	Urban Studies	30	0.5	3803	63.27
36	33	Indian dairyman	28	0.47	3831	63.73
37	33	Indian Journal of Regional Science	28	0.47	3859	64.2
38	33	Quarterly Journal of Economics	28	0.47	3887	64.66
39	34	Econometrica	27	0.45	3914	65.11
40	35	Agricultural Economics Research Review	24	0.4	3938	65.51
41	35	Indian Journal of Fertilisers	24	0.4	3962	65.91
42	36	Reserve Bank of India Occasional Papers	23	0.38	3985	66.3
43	37	Development and Change	22	0.37	4007	66.66
44	37	Economic Affairs	22	0.37	4029	67.03
45	37	IBA bulletin	22	0.37	4051	67.39
46	37	Journal of Indian School of Political Economy	22	0.37	4073	67.76
47	37	National Tax Journal	22	0.37	4095	68.13
48	37	Public Finance/ Finances Publiques	22	0.37	4117	68.49
49	38	Asian Economic review	21	0.35	4138	68.84
50	38	Journal of Agricultural Economics	21	0.35	4159	69.19
51	39	Indian Journal of Dairy Science	20	0.33	4179	69.52
52	39	Prajnan	20	0.33	4199	69.86
53	40	Indian Journal of Social Work	19	0.32	4218	70.17
54	40	Margin: The Journal of Applied Economic Research	19	0.32	4237	70.49
55	41	Finance and Development	18	0.3	4255	70.79
56	41	Indian Journal of Forestry	18	0.3	4273	71.09
57	41	Indian Journal of Public Administration	18	0.3	4291	71.39
58	41	Journal of Monetary Economics	18	0.3	4309	71.69
59	41	World Bank Research Observer	18	0.3	4327	71.98
60	42	Journal of Institute of Public Enterprise	17	0.28	4344	72.27
61	42	Mainstream	17	0.28	4361	72.55
62	42	Regional Development Dialogue	17	0.28	4378	72.83
63	43	Monthly Commentary on Indian Economic Conditions	16	0.27	4394	73.1
64	43	Social Action	16	0.27	4410	73.37
65	43	Social change	16	0.27	4426	73.63
66	44	International Economic Review	15	0.25	4441	73.88
67	44	Journal of Banking and Finance	15	0.25	4456	74.13
68	44	Oxford Bulletin of Economics and Statistics	15	0.25	4471	74.38
69	45	Journal of Economics	14	0.23	4485	74.61
70	45	Small Ent. Dev. Mgt& Ext. Journal (SEDME)	14	0.23	4499	74.85

71	46	Fertiliser Marketing News	13	0.22	4512	75.06
72	46	Journal of Economic Literature	13	0.22	4525	75.28
73	46	Journal of Labour Economics	13	0.22	4538	75.49
74	46	Journal of Peasant Studies	13	0.22	4551	75.71
75	46	World Bank Economic Review	13	0.22	4564	75.93
76	47	Economic Bulletin for Latin America	12	0.2	4576	76.13
77	47	Indian Journal of Economics	12	0.2	4588	76.33
78	47	Kyklos	12	0.2	4600	76.53
79	47	Maharashtra co-operative quarterly	12	0.2	4612	76.73
80	48	Australian Journal of Agricultural Economics	11	0.18	4623	76.91
81	48	Developing Economies	11	0.18	4634	77.09
82	48	Finance India	11	0.18	4645	77.27
83	48	Indian Journal of environmental protection	11	0.18	4656	77.46
84	48	Journal of the Textile Association (JTA)	11	0.18	4667	77.64
85	48	Man and Development	11	0.18	4678	77.82
86	48	Nagarlok	11	0.18	4689	78.01
87	49	Asian Development review	10	0.17	4699	78.17
88	49	Current Anthropology	10	0.17	4709	78.34
89	49	Journal of Human Resources	10	0.17	4719	78.51
90	49	Land Bank Journal	10	0.17	4729	78.67
91	49	Land Economics	10	0.17	4739	78.84
92	49	Monthly Bulletin of Agricultural Economics and Statistics	10	0.17	4749	79.01
93	49	Vikalpa	10	0.17	4759	79.17
94	50	Foreign Trade Review	9	0.15	4768	79.32
95	50	Indian Journal of Agricultural Marketing	9	0.15	4777	79.47
96	50	Indian Journal of Transport Management	9	0.15	4786	79.62
97	50	Journal of finance	9	0.15	4795	79.77
98	50	Journal of the American Statistical Association	9	0.15	4804	79.92
99	50	Manchester School	9	0.15	4813	80.07
100	50	Sankhya: The Indian Journal of Statistics	9	0.15	4822	80.22
101		Other periodicals (less than 9 citations)	1189	19.8	6011	100
Total	6011	100				

In the Ranked list of core journal 'Economic and Political Weekly' occupied in first rank with 1053(17.52%) citations, 'Indian Journal of Agricultural Economics' second rank with 522 (8.68%) citations. 'Southern Economist' third place with 153 (2.55%) citations and fourth place is 'American Economic Review' with 137 (2.28%) and fifth place 'Agricultural Situation in India' with 130 (2.16%) and respectively.

## VII. FINDINGS AND CONCLUSION

The present study is focussed to trace the development of Economics doctoral research level at Bangalore University. Out of 17291 citations from 130 theses analysed by using citation analysis techniques and following findings and

conclusions are drawn. Maximum number of thesis 62 (47.69%) found in 2005-2014 followed by 45 (34.62%) between 1995-2004 and 23 (17.69%) between 1984-1994. Clearly it shows the increase in the research in the recent years. Among 130 theses Highest 76 (58.46%) of thesis submitted in the subject of Micro economics. Researchers show interest more than macro eco economics.

Highest cited documents are journals and books 10533 citations with (60.9%) rather than other bibliographical forms citations 758 with (39.1%). It is observed that Researchers more depended on Journals and Books. It is found from the study that India with 3773 citations (62.77%), USA with 1114 citations (18.53%), UK with 804 citations (13.38%) are three major countries stands top list

in Country-wise publication of ranked core periodicals citations. These three countries have (94.68%) of total citations.

It is concluded from the authorship pattern study that works of Single authored journal article have (70.89%) citations. It shows researchers more consulted single authored journal article compared to multi authored. In the Ranked list of core journal 'Economic and Political Weekly' ranked first with 1053 (17.52%) citations followed by 'Indian Journal of Agricultural Economics' second rank with 522 (8.68%) citations. These two journals have nearly (25%) of the total citations.

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