Research Papers

CITATION ANALYSIS OF PH.D. THESES IN ECONOMICS SUBMITTED TO SRI VENKATESWARA UNIVERSITY

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Abstract :

This paper presents citation analysis of Ph. D theses submitted in the discipline of economics of the Sri Venkateswara University, Tirupati during 1970-2010. The study is based on the 19654 citations cited in 123 Ph. D theses of economics. The study presents the analysis of several parameters like bibliographic form, authorship pattern, year wise distribution of theses, ranking of core journals and books, year wise distribution of cited documents. The study finds that books/online books form is the most preferred sources of information used by the researcher in the field of economics accounting for 49.57%, and most of the field of the citations (65.14%) are contributed by single author, USA (36.73%) is the largest producer of literature in the field of economics compared to other countries and most dominant language was English 95.82%.

KEYWORDS :

Citation analysis, Bibliometrics, Ph.D. Theses in Economics, Sri Venkateswara University.

1. INTRODUCTION

Citation Analysis is the most popular and important technique used in Bibliometric studies. Citation Analysis studies are useful to improve the library services in research. Citation analysis is the analysis of the citations or bibliographical references that are appended with the research communication, like research articles, thesis, reports etc.

According to Weinstock (1971)1 a scientific tradition requires that when a reputable technologist or scientist publishes an article, he should refer to earlier articles, which relate to his theme.

According to Malin (1968)2 Citation implies a relationship between a part or the whole of the cited document and a part or the whole of the citing document.

2. REVIEW OF LITERATURE

The study of citation analysis based on references has appeared in the 123 Ph.D. theses of Economics submitted to Sri Venkateswara University, Tirupati. Pandey and Rajyalakshmi (1997)3 made a study of dissertations in Library and Information Science submitted to Nagpur University during 1990-1994. Lainb and Goi (1997)4 have made citation analysis of 5610 refereces from 104 disserations in Malaya University during 1984-1994. John (1997)5 analysed 1069 1985-1990. Aruna Prasad Reddy (1999)6 analysed the citations appended to 186 doctoral dissertations in the field of Chemistry submitted to Sri Venkateswara University, Tirupati. The Bibliographic form-wise distribution of citations revelaed that journal literature was the most referred source of information (85.03%), followed by books (10.44%), patents (1.25%), dissertations (1.12%) and other (2.18%). Researchers of Chemistry preferred documents published in the English language (73.86%), followed by Russian (4.44%), Japanese (1.46%), German (0.89%), French (0.79%) and Chinese (0.64%). The country-wise scattering of citations showed that USA alone covered 35.51% of total citations, followed by UK (17.91%), India (11.04%), Netherlands (6.11%), Germany (5.67%) and Russia (5.44%). The study of the authorship tend showed that papers with multi-authored were the highest in number (77.50%) and single authored papers constituted 22.50% of the total cited papers. The

half-life period for journal citations was found to be 17.84 and 17.68 years for book citations.

Omkar Murthy (2002)7 conducted a bibliometric study of citations in PhD theses in Geography. Most of the journals citations are from English language, followed by Telugu (0.24%), French (0.12%) and Spanish (0.05%).

Ramesh (2002)8 analysed 381 PhD dissertations submitted by research scholars to different Indian Universities during theses fifty years i.e., 1951-2000.

Zafrunnisha and Reddy (2011)9 found a total of 9275 citations from 56 PhD theses. They found that higher number of citations were of journals, i.e., 9275 citations (63.7%). Multi-authored papers accounted for 63.32% of the citations. The Journal of Applied Psychology occupied the first rank with 4.26% of the citations, and USA ranked first by producing 34.92% of the cited journals. Most of the cited journals of psychology (94.6%) were in English language and maximum citations (47.62%) were from the psychology subject only.

Krishna Moorthy and Mrutyunjaya (2012)10 conducted a bibliometric analysis of literature on Meteorology from 2006 to 2009 as available in the database ISI Web of Science. A total of 1651 articles were collected related to the subject of meteorology for the study. The results shows that the higher number of articles were contributed by multi-authors, which in 844 articles i.e., 51.14% of the article, the highest number of articles were published during the year 2009 i.e., 461 which constitute 27.92% of the total articles, USA has the largest number of publications contributing 626 articles i.e., 37.91% of the total articles.

Dr Kamal Lochan Jena and others (2012)11 in their paper on Annals of Library and Information Studies earlier published as Annals of Library and Documentation that brought out its maiden issue in the year 1952, is identified as one of the best referred journals in the field of Library and information Science in India with a publishing history of 58 years. Due to its standard editorial policy, ALIS has felt its presence in the academic arena by bringing out quality publications that have been highly appreciated by teachers, students, research scholars and authors as well. Moreover, authors feel proud of having a rich publishing experience with ALIS. The study has depicted a nice portrait of ALIS which speaks volumes about the publication policy of this journal. Nevertheless, it has gradually promoted its value through its global readership as it is indexed in DOAJ as an open access journal. It is expected that ALIS will further grow its stature in the days ahead.

Singh and Bebi (2013)12 carried out citation analysis of PhD theses in Sociology submitted to the University of Delhi during 1995-20100. The study is based on the 5,766 citations taken out from 25 theses of sociology. The result shows that higher 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 (26.81%) and UK (22.42%).

Gorre Subba Rayudu and K.Surendra Babu (2014)13 have studied 7,444 citations of 43 PhD theses in philosophy of the University of Hyderabad during 1986-2012. The study presented the analysis of several parameters like bibliographic form, year-wise distribution, authorship patterns, ranking of core journals and country-wise distribution of cited documents. They have concluded, 80.62% were book citations, 53.16% were geographical distribution, 92.60% is language wise distribution. Based on the data collection and analysis, it is drawn that most of research scholars in the department of philosophy have been used books from their research studies only.

M Veerabasavaiah and Padmavathi N (2014)14 have analyzed 42 doctoral theses of Department of Education, Bangalore University, Bangalore. It is found that there were 6688 citations in 42 doctoral theses. The data were collected from the bibliographic section listed at the end of each thesis, which included the details of the articles referred to by the researchers from completing their thesis. The citations were collected in a catalogue card. Citation analysis was carried out to find out the answers for the objectives of the present study. Further, in their findings they observed the authorship productivity of the journal articles was considered, single-author articles were the most cited with 54.04% citations. The remaining 44.03% of citations were multiauthored.

3.OBJECTIVES

The following are the objectives of the present study:

• To know the various types of bibliographic forms consulted by the researchers in Economics;
• To observe the nature of authorship pattern in the literature of Economics;
• To examine the core journals and books of Economics;
• To study the distribution of citations by subject, country of origin and language;
• To prepare a rank list of books and periodicals in the field of Economics.

4. METHODOLOGY

The methodology of the current study is based on the citations from the 123 Ph.D theses submitted to Sri Venkateswara University, Tirupati, during 1970 to 2010, covering 19,654 citations. Data were collected and tabulated by using MS-Excel software and analysed, presented in the form of tables and graphs.

5. SCOPE AND LIMITATION

The present study is based on 19654 citations appended at the end of 123 Ph.D. theses on economics, submitted to Sri Venkateswara University, Tirupati. The span of starting year was taken into consideration that is from 1970-2010.

6. PROFILE OF SRI VENKATESWARA UNIVERSITY

The university stands as a testimony to the wisdom and foresight of great visionaries of Late Sri Tanguturi Prakasam Pantulu, then Chief Minister of Andhra Pradesh and Late Sri Neelam Sanjiva Reddy, to cater the educational needs and aspirations of the people of Rayalaseema area. With a great wisdom, the founder of this University has rightly coined the motto Wisdom lies in proper perspective for it. The university has grown excellently from strength to strength over the past 60 years, as a premier institute of higher learning under the able and committed leaderships of successive Vice-Chancellors starting from Prof. S. Govindarajulu to present Vice Chancellor Prof. W. Rajendra. It has gone through greater strides in the transformation of the university with acquiring necessary and modern sophisticated instrumentation to catch up with the world competition in academic and research programmes.

6.1 Year wise submission of theses

The year wise submission of theses in the discipline of economics of Sri Ventkateswara University in the duration of 1955 to 2010 is shown in Table 6.1. It is evident from the following table that 22.76% (28) of theses submitted in the during the years 1996 -2000, followed by 2001 t0 2005 (21.4%).

Table 6.1 : Chronological distribution of Ph. D theses

Period	SVU Economics Theses	
	No. of Theses available	Percentage
Below 1955	0	0.00
1956-1960	0	0.00
1961-1965	0	0.00
1966-1970	1	0.81
1971-1975	2	1.63
1976-1980	4	3.25
1981 1985	7	5.69
1986-1990	11	8.94
1991-1995	21	17.07
1996-2000	28	22.76
2001-2005	26	21.14
2006-2010	23	18.71
Total	**123**	**100.00**

6.2 Details of Supervision

The distribution of theses according to the name of supervisor is shown in Table 6.2.

Table 6.2: Details of the supervisor

S.No	Name of the Supervisor	No. of Thesis	Percentage
1	Prof. Raghava Reddy, G	19	15.45
2	Dr. Narasimhulu, K	16	13.01
3	Prof. Munidoraswamy Naidu, K	11	8.94
4	Dr. Raghavulu naidu, B	8	6.5
5	Prof. Sreenivasulu Naidu, K	5	4.07
6	Prof. Munirathanam Naidu, E	5	4.07
7	Prof. Ranga reddy A	5	4.07
8	Prof. Narayana DL	4	3.25
9	Dr. Devarajulu Naidu C	4	3.25
10	Dr. Prasad, P	3	2.44
12	Dr. Rathna Kumari, S	3	2.44
13	Dr. Padmavathi.A	3	2.44
14	Prof. Chandra Sekhar Rao G	3	2.44
15	Dr. Sugayya N	3	2.44
16	Prof. Narasimha Reddy D	3	2.44
17	Prof. Sai Baba G	3	2.44
18	Prof. N.V. Narayana	3	2.44

19	Dr. Krishana Murthy D	2	1.63
20	Prof. Chinnaswamy Naidu M	2	1.63
21	Dr. Devaseena Naidu P	2	1.63
22	Dr. Krishanaiah Chetty VB	2	1.63
23	Dr. Naidu V J	1	0.81
24	Dr. Rao BRK	1	0.81
25	Prof. Devarajulu M	1	0.81
26	Prof. Erraiah G	1	0.81
27	Prof. Kothandaram Naidu L	1	0.81
28	Prof. Santha Kumari K	1	0.81
29	Dr. Gangaiah C	1	0.81
30	Prof. Kannaiah Naidu L	1	0.81
31	Prof. Naidu V T	1	0.81
32	Dr. Rama swami Naidu Y	1	0.81
33	Dr. Balakrishnama Naidu V	1	0.81
34	Prof. Kasaiah CP	1	0.81
35	Dr. Kodandarami Reddy V	1	0.81
36	Dr. Meera Reddy V	1	0.81
		123	100

It is evident from the Table 6.2 that out of 123 Ph. D theses19 theses were submitted under the guidance of Prof. G. Raghava Reddy, 16 theses were submitted under the guidance of Dr. K Narasimhulu and 11 theses under the guidance of Prof. K. Munidoraswamy Naidu. Prof. B. Raghavulu Naidu, Prof. K. Sreenivasulu Naidu and others appeared at the bottom of the ratings with 0.81, under the guidance of economics department.

7. FINDINGS OF THE STUDY

The analysis of cited literature in economics reveals the following findings

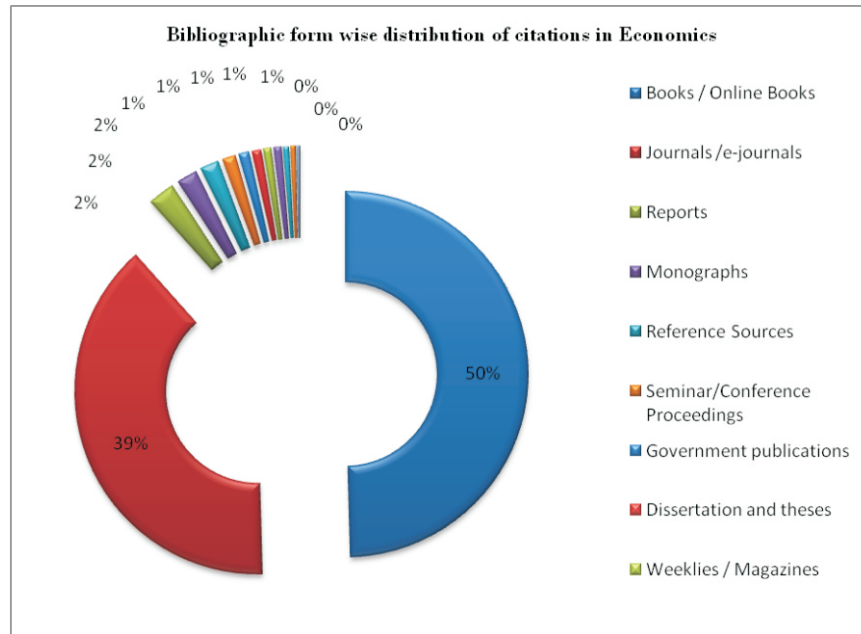### 7.1 Bibliographic form of citations in economics

The details of citations according to their bibliographic form in economics is shown in Table 7.1 and Figure 7.1

Table 7.1 : Bibliographic form wise distribution of citations in Economics

S. No	Bibliographic form	No. of Citations	Percentage
1	Books / e- Books	9742	49.57
2	Journals /e-journals	7635	38.85
3	Reports	472	2.40
4	Monographs	364	1.85
5	Reference Sources	331	1.68
6	Seminar/Conference Proceedings	240	1.22
7	Government publications	186	0.95
8	Dissertation and theses	166	0.84
9	Weeklies / Magazines	142	0.72
10	Manuscripts	138	0.70
11	WWW /Internet	96	0.49
12	Un-identified	84	0.43
13	Newspapers	58	0.30
	Total	**19654**	**100.00**

It is obvious from the Table 7.1 that Books/e-books have highest percentage (49.57%) citations in economics discipline out of 19654 citations followed by Journals/e-journals (38.85%), Reports (2.40%), Monographs (1.85%), Reference sources (1.68%), Seminar/Conference proceedings (1.22%), Government publications (0.95%), Dissertation and Theses (0.84%), Weeklies/Magazines (0.72%), Manuscripts (0.70%), WWW/Internet (0.49%), Un-identified (0.43%)and Newspaper (0.30%).

Figure 7.1:   Bibliographic form wise distribution of citations in Economics
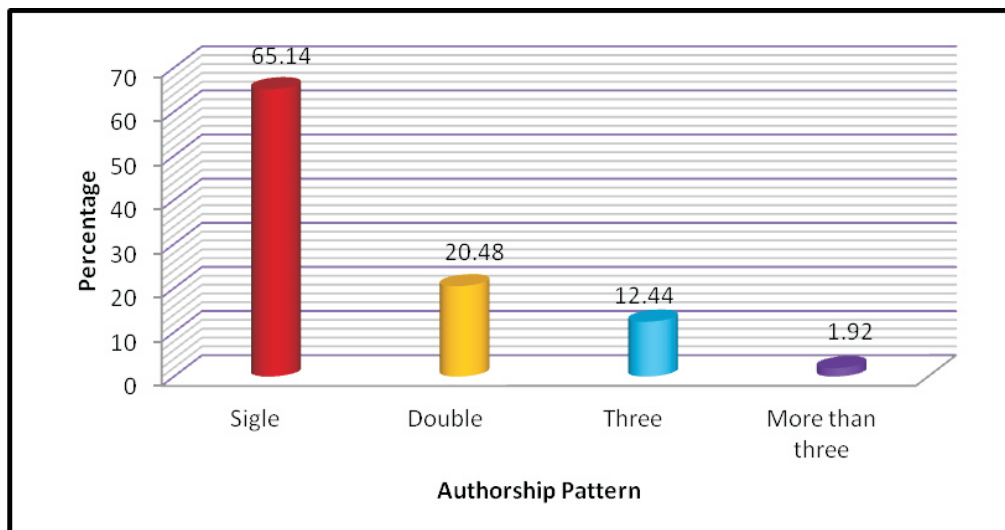

7.2 Authorship pattern of documents

The distribution of citations of books and journal articles according to number of authors is shown in Table 7.2 and Figure 7.2.

Table 7.2: Authorship pattern of citations

S. No.	No. of authors	No. of Citations	Percentage
1	Single author	12804	65.14
2.	Two authors	4027	20.48
3.	Three authors	2446	12.44
4.	More than three	377	1.92
	Total	**19654**	**100**

The Table 7.2 depicts that most of the citations (65.14%) are contributed by single authors and remaining citation are contributed by two authors (20.48%) and three authors (12.44%) and more than three authors (1.92%) in the discipline of economics.

Figure 7.2: Authorship patterns of citations

7.3 Analysis of citations by language

The analysis of citations by language wise is shown in Table 7.3

Table 7.3: Analysis of citations by language

S. No.	Language	No. of Citations	Percentage
1.	English	18833	95.82
2.	Un-identified	413	2.10
3.	Mandarin and English	151	0.77
4.	English and Czech	126	0.64
5.	French	26	0.13
6.	English and Sanskrit	24	0.12
7.	Dutch	18	0.09
8.	Portuguese	16	0.08
9.	Arabic	16	0.08
10.	Chinese and English	12	0.06
11	Japanese and English	9	0.05
12	English and Hindi	8	0.04
13	Korean and English	2	0.01
	Total	19654	100.00

It can be seen from the Table 7.3 that the majority (95.81%) of citations in English language. This is followed by un-identified (2.10%), Mandarin and English (0.77%). English and Czech (0.64%), French (0.13%), English and Sanskrit (0.12%), Dutch (0.09%), Portuguese and Arabic (0.08%), Chinese and English (0.06%), Japanese and English (0.05%), English and Hindi (0.04%) and Korean and English (0.01%) in citations by language in Economics.

7.4 Geographical scattering of citations

The geographical scattering of cited literature by researches in economics is shown in Table 7.4

Table 7.4: Geographical scattering of citations

S. No.	Country	No. of Citations	Percentage	Cumulative No. of citations	Cumulative Percentage
1	USA	2316	36.73	2316	36.73
2	India	1771	28.08	4087	64.81
3	United Kingdom	1036	16.43	5123	81.24
4	Canada	410	6.5	5533	87.74
5	Unidentified	345	5.47	5878	93.21
6	Australia	328	5.2	6206	98.41
7	South Africa	78	1.24	6284	99.65
8	Czech Republic	13	0.21	6297	99.86
9	Denmark	5	0.08	6302	99.94
10	Egypt	4	0.06	6306	100
	Total	**6306**	**100**	**6306**	**100**

It is evident from the Table 7.4 that U.S.A is the largest producer of literature in the field of economics. It accounts for 36.73% of the total literature. This is followed by India (28.08%), United Kingdom (16.43%), Canada 6.5%), unidentified (5.47%), Australia (5.2%), South Africa (1.24%), Czech Republic (0.21%), Denmark (0.08%), and Egypt (0.06%) in the field of economics.

7.5 Ranking of journals used by the research scholars in Economics

The journals which are highly cited in documents is the most important journal to keep in the library, for that purpose of journal ranking for the librarian as well as researchers.

Table 7.5: Ranking of Top Ten Journals

S. No.	Rank	Journal Name	No. of Citations	Percentage	Cumulative No. of Citations	Cumulative Percentage
1	1	Indian Journal of Agricultural Economics.	776	16.34	776	16.34
2	2	India's Capital Account, Balance of Payments: 1950-51 to 1980-81.	704	14.83	1480	31.17
3	3	Indians Journal of Agricultural Science.	656	13.82	2136	44.99
4	4	Journal of Educational and Occupational Characteristics of Manpower and International comparison.	454	9.56	2590	54.55
5	5	Journal of Real Wages of Agricultural Labour	403	8.49	2993	63.04
6	6	Journal of a Momentary and Fiscal Framework Economic Stability.	376	7.92	3369	70.96
7	7	Journal of Constraints on Agricultural Productivity: A District Level Analysis.	361	7.6	3730	78.56
8	8	Advertising Influence on Consumers	355	7.48	4085	86.04
9	9	Journal of Institutional Credit for Agriculture in India.	349	7.35	4434	93.39
10	10	Journal of Labour Problem and India's Development Strategy, the Indian Journal of Agricultural Economics.	314	6.61	4748	100
		Total	4748	100	4748	100

Table 7.5: First Ten Ranking of Journals

The Table 7.5 depicts that the journal citations cited by research scholars in economics are scattered in first 10 journals. Among them, Indian Journal of Agricultural Economics occupies 1st place being cited more number of times with 16.34% of citations, followed by India's capital Account, Balance of payments: 1950-51 to 1980-81 occupies 2nd place with 14.83%, Indians Journal of Agricultural Science occupies 3rd place with 13.82. Finally, Journal of Labour problem and India's development strategy, the Indian Journal of Agricultural Economics occupies 10th place with 6.61% in the field of economics.

7.6 Ranking of books

Books are the most reliable medium for communication and spread of knowledge. From the Table it is observed that out of 19654citation, 1177 citations are book citations. Only 10 ranked books have been given in Table 7.6 which is most preferred by the researchers of economics.

Table 7.6: First Ten Ranking of Books

S.No.	Rank	Journal name	No. of Citations	Percentage	Cumulative No. of Citations	Cumulative Percentage
1	1	Indian Economy	202	17.16	202	17.16
2	2	Rural Development	183	15.55	385	32.71
3	3	Agricultural Science.	120	10.2	505	42.91
4	4	Educational and Occupational Characteristics of Manpower and International Comparison.	110	9.35	615	52.26
5	5	Theory, History and Practice of Cooperation	105	8.92	720	61.18

6	6	Agricultural Economics.	98	8.33	818	69.51
7	7	Agricultural productivity: A District Level Analysis.	94	7.99	912	77.5
8	8	Advertising Influence on Consumers,	92	7.82	1004	85.32
9	9	Institutional Credit for Agriculture in India.	91	7.73	1095	93.05
10	10	India's Development Strategy.	82	6.95	1177	100
		Total	**1177**	**100**	**1177**	**100**

The rank list of the books in the field of economics reveals that 17.16% of the total citations are found in the book entitled Indian economy which obtained first rank for being cited more number of times. The Rural development (15.55%) obtained second rank. Agricultural Science (10.2%), Educational and occupational Characteristics of Manpower and International comparison (9.35%), and Theory, History and practice of cooperation (8.92%) is most frequently used books.

7.7 Ranking of Web Citations

The Table 7.7 shows the first ten ranks in web citations in the field of economics.

Table 7.7: First ten ranking of web citations

S.No	URL web-sites	Citation	Percentage	Rank
1	http://www.census india.net/	271	33.29	1
2	http://www.nird.org.	132	16.22	2
3	http://www.mapsofindia.com	118	14.50	3
4	http://www.ssi.nic.in	74	9.09	4
5	http://rural.nic.in	61	7.49	5
6	www.indiabudget.nic.in	59	7.25	6
7	www.smallindustry.india	36	4.42	7
8	http://planning commission. nic.in	29	3.56	8
9	www.google.co.in/books	18	2.21	9
10	http://agricoop.nic.in	16	1.97	10
	Total	814	100.00	

It reveals from the Table 7.7 that http://www.census india.net/ is occupies 1st rank for most (33.29%) cited on web followed by http://www.nird.org occupies 1st rank (16.22%), and http://www.mapsofindia.com occupies 3rd rank (14.50%) websites in the field of economics.
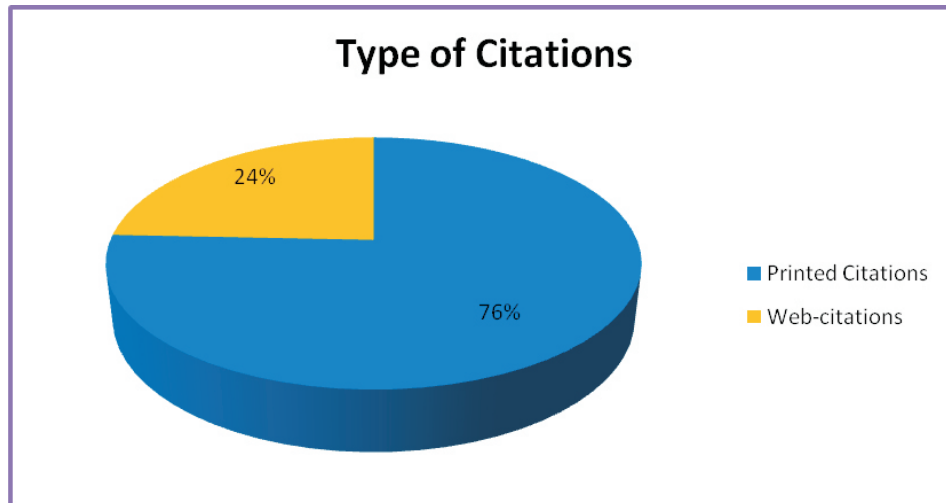
7.8 Types of citations

The Table 7.8 and Figure 7.8 show the frequency and percentage in types of citations in the field of economics.

Table 7.8 Citations – frequency and percentage

S.No	Type of Citations	Frequency	Percentage
1	Printed Citations	14870	75.66
2	Web-citations	4784	24.34
	Total	**19654**	**100**

It is evident from the theses 7.8 that most of the citations (75.66%) are printed citation and remaining of the (24.34%) are web citations.

Figure 7.8: Difference between Printed-Citations and Web-Citations

8. FINDINGS AND CONCLUSIONS

1. Majority of citations (49.57%) cited in 123 Ph.D theses in Economics from book literature.
2. Majority of theses (22.76%) submitted during the years 1996 to 2000 followed by 2001 to 2005 (21.14%) and 2006 to 2010 (18.71%)
3. Majority of the citations cited in Economics from books (49.57%), followed by journals (38.85) etc.
4. Most of the citations contributed by single author (65.14%) followed by two authors (20.48%).
5. Indian journals of Agriculture Economics occupies first rank for being cited more number of time (16.34%).
6. Majority of citations contributed by USA (36.73%), India (28.08%), UK (16.43%) in Ph.D. thesis in Economics submitted to S.V.University.

REFERENCES

1.Weinstock (M). Citation Indexes. In: Encyclopaedia of Library and Information Science. V5. 1971. Marcel Ducker, New York.
2.Malin (M V). The Science Citation Index: A new Concept in Indexing, Library Trends 16; 1968; 374-387.
3.Pandey (M Desh) and Rajyalakshmi (D). Citation Study of dissertations in library and Information Science. Annals of Library Science and Documentation. 44; 1997; 41-53.
4.Lainb (A N) and Goi (S S). Characteristics of Citations by Humanities researchers, Malaysian Journal of Library and Information Science. 2; 1997; 19-36.
5.John (Jessy). Information needs, use pattern and use behavior of social scientists: Analysital approach through citation method. In Devarajan (G), Ed. Bibliometric Studies. 1997. ESS ESS Publications, New Delhi. P 228-259.
6.Aruna Prasad Reddy (C). Bibliometric Study of citations in Ph.D thesis in Chemistry 1964-1997 accepted by S V University, Tirupati – Visakhapattanam Andhra University, Ph.D 1999.
7.Omkar Murthy (A). Bibliometric Study of citations in Ph.D theses in Geography of S V University, Tirupati. S V University, M.Phil 2002.
8.Ramesh (LSRCV). Fifty years of Library and Information Science research in India. A bibliometric study. Indian Journal of Information Library and Society. 15;2002;10-23.
9.Zafrunnisha N and Reddy, V.P. (2011). Citation analysis of Ph.D theses in psychology. A quantitative analysis. Pearl: A Journal of Library and Information Science, 5(1):58.
10.Krishnamoorthy (C) and Mrutyunjaya (K), Meteorology: A Bibliometric Study., Indian Journal of Library and Information Technology. 8; 2012.
11.Dr Kamal Iochan Jena, Dr.Dillip K Swain and Dr K C Sahoo(2012) Annals of Library and Information Studies,2002-2010: A Bibliometric Study, Library Philosophy and Practice 2012 April, ISSN 1522-0222
12.Singh (KP) and Bebi. Citation Analysis of Ph.D Theses in Sociology submitted to University of Delhi during 1999-2010. DESIDOC Journal of Library and Information Technology. 33(6); 2013; 489-493.
13.Gorre Subba Rayudu and K.Surendra Babu, Citation Analysis of Ph.D theses in Philosophy Submitted to University of Hyderabad, e-Library Science Research Journal, Vol. 2, Issue 6., April 2014. ISSN: 2319-8435.
14.Veerabasavaiah (M) and Padmavathi (N), Citation Analysis of Doctroal Theses in Education Submitted at the Bangalore University, Bangalore during 2003-2012. PEARL- A Journal of Library and Information Science, Vol.8., No.2., April-June 2014. Pp 114-123.

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