

Research Productivity of Social Scientists in Tamilnadu State Universities: A Bibliometric Study using Web of Science Database

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Abstract

This study analyzes the research activities of Tamilnadu State Universities during 1989-2020, based on the total publication output, its growth of Publications, quality of papers published. Patterns of international collaborative research output and the major partner countries are also discussed. This study also evaluates the research performance of Social Scientists, universities characteristics of published literature in Indian and foreign journals. The publication data on Social Science has been retrieved by using web of Science database with 610 publications. The study found that 26 countries recorded more than 10 Publications and 98 countries with minimum of 1000 Citations in the context of international collaborations. A total 610 publications in Social Science research were published in 382 journals. INDIAN JOURNAL OF SOCIAL WORK is the highly productive journal with 17 publications. There is also a need to improve the style of Publications, which should foster research culture in the field of Social Science.

Keywords: Bibliometrics; Citations; H-Index, Social Scientists;

Introduction

Bibliometrics is about applying quantitative methods to bibliographic data, often focusing on how many times research outputs and publications are cited. It can help with activities like: Demonstrating the impact of research. Looking at highly cited journals in a subject area, which can be helpful for deciding where to publish. Its measures of output and indicators of impact. Probably the simplest bibliometric is a count of publications. More advanced bibliometrics help you to understand the impact of your academic publications within the scope of the worldwide research community. We can use bibliometrics to look at different types of impact. Impact at point of publication: top journals in our field, How many times has our paper been cited, Who is citing your work, Which researchers from which institutions, which subject areas are most of our citations coming, impact through collaboration: How international is the scope of our collaboration.

Scope and Methodology

The present study attempts to find out the publication pattern of Social Scientists from Tamilnadu State universities. The study is based on the references and aims to analyse quantitatively the growth and development of social science research in terms of publication output as reflected in Web of Science database during years, 1989-2020. Web of Science is the largest abstract and citation database of research literature and quality web-only journals. It's designed to enable not only the researchers for accessing scientific information but provide the information scientists to study the literature for different information analyses purposes. Quick, easy and comprehensive, Web of Science provides superior support of the literature research process.

Objectives of the Study

The main objective of the study is to present the growth of literature and make the quantitative assessment of status of Social Science Research in State Universities of Tamilnadu by analyzing the various features. The specific objectives are:

- To measure the year wise growth of Publications;
- To measure university wise distribution of Publications and Citations;
- To measure source of Publications;
- To measure the document type of Publication;
- To measure the author wise distribution of Publications;
- To measure the Citations and H-Index;

Methods

The records were downloaded from the online Web of Science for the studied period. The records then were exported in to the basic dataset created for the study. Any scientometric mapping exercise requires a customized database structure so that analytical processing can be executed.

Year wise distribution of Publications

Table 1 shows the year-wise distribution of papers published by Social Scientists from State Universities in Tamilnadu. A total 610 publications were made during 1989-2020, which have received 15847 Global Citation Scores. Table shows that the highest numbers of publications (58) were published in 2019, which have received 208 citations. The second highest publications (46) occurred in the year 2016 and 2018 respectively, followed by 44 publications in the year 2015, 2017 with 42 Publications, 2020 with 39 Publications. Before 2008 recorded single digit of Publication. The highest number of Citation received in the year of 2015 with 9301 followed by 982 in 2014, 923 in 2012 and 700 in 1993.

Table 1 shows year wise distribution of Publications and Citations

#	Year	Records	%	TGCS		Year	Records	TGCS
1	2019	58	9.5	208		2015	44	9301
2	2016	46	7.5	346		2014	36	982
3	2018	46	7.5	322		2012	31	923
4	2015	44	7.2	9301		1993	17	700
5	2017	42	6.9	334		2016	46	346
6	2020	39	6.4	33		2017	42	334
7	2014	36	5.9	982		2018	46	322
8	2012	31	5.1	923		2005	10	247
9	2011	25	4.1	236		2002	7	246
10	2013	23	3.8	192		2010	16	242
11	1993	17	2.8	700		2011	25	236
12	2010	16	2.6	242		2006	10	214
13	1989	15	2.5	77		2019	58	208
14	1991	12	2.0	29		2013	23	192
15	1992	12	2.0	77		2007	10	189
16	2000	12	2.0	132		2009	10	178
17	1997	11	1.8	16		2001	10	169
18	1996	10	1.6	26		2000	12	132
19	1998	10	1.6	22		2004	4	131
20	2001	10	1.6	169		2008	8	84
21	2005	10	1.6	247		1989	15	77
22	2006	10	1.6	214		1992	12	77
23	2007	10	1.6	189		2003	7	66
24	2009	10	1.6	178		1999	6	58
25	2008	8	1.3	84		1995	5	41
26	1994	7	1.1	1		2020	39	33
27	2002	7	1.1	246		1991	12	29
28	2003	7	1.1	66		1996	10	26
29	1990	6	1.0	25		1990	6	25
30	1999	6	1.0	58		1998	10	22
31	1995	5	0.8	41		1997	11	16
32	2004	4	0.7	131		1994	7	1

University wise distribution of Publications and Citations

Table 2 shows the Tamilnadu State Universities contributed 610 publications in Social Science during 1989-2020. Anna University, Chennai topped the list with 219 publications and recorded 2614 Citations (H-Index is 24), followed by University of Madras with 136 Publications and recorded 11052 Citations(H-Index-20), Annamalai University, Chidambaram with 75 publications and received 865 Citations (H-Index -17), Bharathiar University with 63 Publications and received 394 Citations (H-Index-11) and Bharathidasan University with 40 Publications and received 279 Citations.

Table 2 University wise distribution of Publications, Citations and H-Index

Name of the University	Publications	Citations	Without self Citations	ACPP	Highly Cited	H-Index
Anna University	219 (14755)	2614	2564	11.94	524 (1126)	24
Annamalai University	75 (7087)	865 (119519)	855 (104601)	11.53 (16.86)	73 (686)	17 (110)
Bharathidasan University	40(4863)	279(77055)	276(67063)	6.98(15 .85)	67(992)	8(97)
Bharathiar University	63(5781)	394(89152)	388(79611)	6.25(15 .42)	85(1030)	11(103)
Madurai Kamaraj University	35(4462)	152(65876)	150(58076)	4.34(14 .76)	26(403)	7(90)
University of Madras	136(9948)	11052(14912 3)	11045(136023)	81.26(1 4.99)	3790(3790)(49 6Institutes)	20(115)
Gandhigram Rural Institute	32(1579)	346(30069)	343(26851)	10.81(1 9.04)	68(1526)	11(71)
Manonmaniam Sudaranar University	15(1329)	157(16216)	154(14692)	10.47(1 2.2)	46(936)	7(49)
Mother Teresa Women's University	10(194)	36(2631)	35(2631)	3.6 (13.56)	26(212)	3(26)
Tamil University	4(99)	0(1160)	0(1112)	0 (11.72)	0(74)	0(17)
Periyar University	13(1763)	123(21380)	112(18775)	9.46 (12.13)	26(212)	7(56)

International Collaboration

Tamilnadu State Universities has internationally collaborated with 113 Countries and involved the research in Social Science field, which published at least one publication. The USA topped the list with highest share (54) of publications(10388 Citations), Italy with 51 share of publications (10248 Citations) followed by UK with 34 share of publications(10783 Citations), Australia with 26 share of publications(10308 Citations), Germany with 19, China and Canada with 17 share of publications respectively. The study found that 26 countries recorded more than 10 Publications and 98 countries with minimum of 1000 Citations.

Table 3 shows that Internation Collaboration of Social Scientists

Country	Records	TGCS	Country	Records	TGCS
USA	54	10388	Iceland	5	9541
Italy	51	10248	Indonesia	5	9541
UK	34	10783	Papua N Guinea	5	9541
Australia	26	10308	Sri Lanka	5	9541
Germany	19	9689	Uganda	5	9541
Peoples R China	17	9740	Tanzania	5	8853
Canada	17	9668	Tunisia	5	8851
France	16	9756	Chile	5	6680
South Korea	16	9633	Bulgaria	4	8850
Japan	15	9705	Iraq	4	8850
Spain	14	9727	Ukraine	4	8850
Malaysia	14	9630	Uruguay	4	8850
Brazil	12	9623	Belize	4	8652
New Zealand	11	9669	Zambia	4	8652
Taiwan	11	9635	Ghana	4	6657
Netherlands	11	9604	Libya	4	5969
Ethiopia	11	9601	Botswana	4	5771
Denmark	11	9599	New Caledonia	4	5751
South Africa	10	9643	Rwanda	4	5751
Vietnam	10	9612	Romania	4	5063
Pakistan	10	9609	Palestine	4	1584
Russia	10	9606	Kuwait	4	66
Saudi Arabia	10	9593	Gambia	3	7961
Oman	10	9579	Syria	3	7961
Switzerland	10	9471	U Arab Emirates	3	7563
Singapore	9	9608	Cameroon	3	5768
Portugal	9	9548	Peru	3	5768
Mexico	8	9594	Ireland	3	3858
Nigeria	8	9579	Belgium	3	3810
Bangladesh	8	9574	Croatia	3	674
Norway	8	9566	Sudan	2	6674
Lebanon	8	9564	DEM REP CONGO	2	5077
Turkey	7	9599	St Lucia	2	4481
Finland	7	9561	Kazakhstan	2	20

Greece	7	9561	Nepal	2	8
Egypt	7	9545	Azerbaijan	1	3790
Sweden	7	9544	Barbados	1	3790
Kenya	6	9608	Yemen	1	3790
Serbia	6	9558	Mali	1	1287
Philippines	6	9554	Niger	1	1287
Cyprus	6	9544	Panama	1	1287
Jordan	6	9544	Thailand	1	1287
Morocco	6	9544	JAMAICA	1	68
Argentina	6	9542	ZIMBABWE	1	68
Slovakia	6	9542	Cuba	1	17
Iran	6	9541	Poland	1	4
Qatar	6	9541	Bhutan	1	3
Israel	6	8932	Costa Rica	1	3
Austria	6	8876	Czech Republic	1	3
Afghanistan	5	9541	Latvia	1	3
Bahrain	5	9541	Mauritius	1	3
Benin	5	9541	Moldova	1	3
Colombia	5	9541	Mongolia	1	3
Cote Ivoire	5	9541	St Vincent	1	2
Estonia	5	9541	Trinidad Tobago	1	2
Fiji	5	9541	Algeria	1	1
Georgia	5	9541			

Document type wise distribution of Publications

Table 4 illustrates the document wise distribution of publication in Social Science research from (1989-2020). The maximum 480 of research papers were found in 'Journal Articles' type documents, followed by 52 of records were 'Meeting Abstrac' type documents and 'Review 32; Book Reviews with 21; and remaining forms of publications are displayed in the below table.

Table 4 shows that Document type wise distribution of Publications

#	Document Type	Records	%	TLCS	TGCS
1	Article	480	78.7	71	14683
2	Meeting Abstract	52	8.5	0	1
3	Review	32	5.2	8	1033

4	Book Review	21	3.4	0	0
5	Editorial Material	8	1.3	5	44
6	Article; Proceedings Paper	6	1.0	4	74
7	Article; Early Access	5	0.8	0	0
8	Letter	3	0.5	3	6
9	Note	3	0.5	1	6

Source title wise distribution of Publications

A total 610 publications in Social Science research were published in 382 journals. INDIAN JOURNAL OF SOCIAL WORK is the highly productive journal with 17 publications and recorded 9 Citations, followed by INTERNATIONAL JOURNAL OF PSYCHOLOGY with 11 Publications, JOURNAL OF DHARMA, SCIENTOMETRICS and Values in Health with 10 Publications respectively. Library and Information Science (Impact Factor 2.39) is also having high Impact compare with other discipline.

Table 5 shows Source title wise distribution of Publications

#	Journal	Records	%	TLCS	TGCS
1	INDIAN JOURNAL OF SOCIAL WORK	17	2.8	2	9
2	INTERNATIONAL JOURNAL OF PSYCHOLOGY	11	1.8	0	40
3	JOURNAL OF DHARMA	10	1.6	0	1
4	SCIENTOMETRICS	10	1.6	2	133
5	VALUE IN HEALTH	10	1.6	0	12
6	INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY	8	1.3	2	109
7	JOURNAL OF RURAL DEVELOPMENT	8	1.3	0	0
8	MAN IN INDIA	8	1.3	0	1
9	AFRICAN JOURNAL OF BUSINESS MANAGEMENT	7	1.1	0	17
10	JOURNAL OF FAMILY WELFARE	7	1.1	2	5
11	QUALITY OF LIFE RESEARCH	7	1.1	0	551
12	CURRENT SCIENCE	6	1.0	1	14
13	JOURNAL OF CLEANER PRODUCTION	6	1.0	1	104
14	JOURNALS OF GERONTOLOGY SERIES A-BIOLOGICAL SCIENCES AND MEDICAL SCIENCES	6	1.0	1	158
15	LANCET	6	1.0	5	9541
16	PSYCHOTHERAPY AND PSYCHOSOMATICS	6	1.0	9	82
17	TOTAL QUALITY MANAGEMENT & BUSINESS EXCELLENCE	6	1.0	3	133
18	AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY	5	0.8	1	53
19	COGNITIVE SYSTEMS RESEARCH	5	0.8	0	4
20	INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND	5	0.8	0	27

	PUBLIC HEALTH				
21	ARTIFICIAL INTELLIGENCE REVIEW	4	0.7	2	45
22	ASIAN FOLKLORE STUDIES	4	0.7	0	0
23	BEHAVIOURAL PROCESSES	4	0.7	1	57
24	CURRENT PSYCHIATRY REPORTS	4	0.7	0	202
25	CURRENT PSYCHOLOGY	4	0.7	1	12
26	ENERGY POLICY	4	0.7	5	114
27	ENVIRONMENTAL MONITORING AND ASSESSMENT	4	0.7	0	3
28	PSYCHO-ONCOLOGY	4	0.7	0	2
29	RAIRO-OPERATIONS RESEARCH	4	0.7	0	2
30	ENERGY & ENVIRONMENT	3	0.5	0	3

Author wise distribution of Publications

Author wise distribution of publication is given in the Table 6. Author Grassi L has contributed high productive publications with 26 followed by Uthayakumar, R with 19, Suganthi, L with 18 Publications, Caruso R with 15, Gupta and Nanni with 13 publications respectively and Audinarayana and Sundaram with 10 publications respectively.

Table 6 shows author wise distribution of Publications

#	Author	Records	TGCS	Author	Records	TGCS
1	Grassi L	26	478	Massarenti S	7	33
2	Uthayakumar R	19	276	Naghavi M	7	9624
3	Suganthi L	18	705	Pugazhendhi S	7	129
4	Caruso R	15	350	Vos T	7	9624
5	Gupta R	13	19158	Balakrishnan K	6	9578
6	Nanni MG	13	352	Basu A	6	9626
7	Audinarayana N	10	41	Geetha TV	6	28
8	Sundaram S	10	66	Kumar GA	6	5834
9	Muralidharan C	9	189	Lim SS	6	6740
10	Sabato S	8	198	Murray CJL	6	8337
11	Achyuthan H	7	133	Pandian JD	6	9587
12	Balachandar V	7	6	Sasikala K	6	1
13	Dandona L	7	9624	Velraj G	6	96
14	Dandona R	7	9624	Abd-Allah F	5	9541
15	Iniyana S	7	181	Abera SF	5	9541

Citing Articles

It is found that there were 10507 papers, which have cited by University of Madras followed by Anna University with 2493 Citing Articles and Annamalai with 822 Citing Articles. It is noted that Anna University has published 44 publications in Open Access Journals followed by University of Madras with 27 Publications.

Table 7 shows that Citing Articles and Open Access publications

Name of the University	Publications	Citing Articles	Without Self Citations	Open Access
Anna University	219(14755)	2493	2461	44(1768)
Annamalai University	75(7087)	822(83732)	815(79534)	7(881)
Bharathidasan University	40(4863)	278(54056)	275(67063)	5(660)
Bharathiar University	63(5781)	383(64890)	378(61822)	9(793)
Madurai Kamaraj University	35(4462)	150(50376)	148(47761)	1(523)
University of Madras	136(9948)	10507(115752)	10502(110974)	27(1464)
Gandhigram Rural Institute	32(1579)	313(21049)	311(20016)	7(91)
M.S. University	15(1329)	144(13455)	142(12859)	5(192)
Mother Teresa Women's University	10(194)	36(2322)	35(2233)	1(14)
Tamil University	4(99)	0(1033)	0(1005)	4(18)
Periyar University	13(1763)	96(16655)	92(15748)	3(257)

Conclusion

Among the collaborative partners, Tamilnadu State Universities has published the highest collaborative research output with USA. The research output of State universities collaborated with 1446 Institutions. The research output of Universities published in 382 productive journals during 1989–2020. In order to increase the research output, improve the quality and undertake more focused research, there is an urgent need to formulate the research plan. There is also a need to improve the research in Social Science, UGC has to support the more fund to Social Scientists compare with Science. There should be a proper resource allocation to different areas, which should also be monitored regularly. Access to national and international literature and knowledge base should be provided to contributors.

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