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# Research Productivity of Faculty Working in Christian Institutions of Higher Education in India: A Bibliometric Analysis

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**Research Productivity of Faculty Working in Christian Institutions of Higher Education in  
India: A Bibliometric Analysis**

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**Abstracts**

Bibliometric analysis of Research productivity of faculty working in Christian institutions of higher education in India using Web of Science database from 1989 to 2016.In this study Karunya University, Coimbatore in Tamil Nadu is in the top of all other institutions with 934 records (25.27%), followed by Mar Ivanios College, Trivandrum in Kerala with 365 records (9.88. Annual Growth Rate of publication output of CHEIs is the highest in 2008 (0.96) followed by 2006(0.95) and 1992 (0.60). Top 10 author-wise research output of Indian Christian Higher Education Institution author Joe IH gets highest 7.48% out of 119 records who is serving to Mar Ivanios College, Trivandrum, Kerala,and his subject is physics.

**Introduction**

Research is carried out for the development of knowledge, improvement of existing knowledge, to provide solutions to specific problems, and to improve processes and practices. Since research findings have significance and value for society, research has attained an important place in all the fields of knowledge. The present research is on the Research Productivity of faculty working in Christian Higher Education Institutions in India: A Bibliometric approach using specified parameters of bibliometrics.

**Keywords**

AIACHE, Christian Higher Education Institution, Bibliometrics, Annual Growth Rate

## **Christian Colleges in India**

The All India Association for Christian Higher Education (AIACHE) claims that there are 323 higher education colleges in India. Belonging to the Catholic, Protestant and Orthodox Churches, all these colleges work for the promotion of the quality, value-orientation and social relevance of Indian higher education to achieve the goal of national integration. Also, it is claimed that they strive to produce intellectually competent, morally upright, socially committed, spiritually inspired and patriotic men and women in the service of India today and tomorrow.

## **Review of Literature**

**Melvin Jebaraj, C., and Thirunavukkarasu, A. (2016)** have analyzed the growth of scientific discipline in open access publications in Alagappa University. The distribution of literature analyzed by year, source, most prolific author word wise, a scattering of articles in different journals and institution with the subdivision of publications. The study analyzed that the most prevalent form of publication is a journal article (113 papers) followed by proceeding papers as a source of research publication takes second place in the order of three papers. The study points out that Singapore and South Korea are the most collaborative research partners with Alagappa University. **Baskaran,C (2013)** has analyzed the research output of Alagappa University during 1999-2011 the data were collected from the web of science database. There are totally available in 776 records available. Relative growth rate (RGR) was found to be a fluctuating trend during the study period. The doubling time (DT) was found to be increased and decreased trend in this study. The degree of collaboration and its' mean value is found to be 0.963. The top three institutions with Alagappa University are Central Electro Chemical Research Institute, National Cheng King University, and Anna University.

## **OBJECTIVES**

Main objectives of the study are given below:

1. To identify the year wise research output in CHEI
2. To identify the Annual Growth rate
3. To identify the Author wise research output

4. To identify the core journals in which the faculty members of CHEI publish their research.

## **METHODOLOGY**

Data for the present study were collected from the Web of Science database from the period 1989-2017. Details of Christian institutions were taken from the website/portal of <https://aiache.co.in/>. The AIACHE portal has listed 323 member Institutions. Of these only 87 institutions find a place in the Web of Science Database. The total count of these 87 institutions is 3696 records (publications) that have been contributed by them over a period of 29 years. The downloaded data were exported to Microsoft Excel environment for tabulation and analysis. These data were analyzed and tabulated with the HistCite package if possible, otherwise manually.

## **DATA ANALYSIS AND INTERPRETATION**

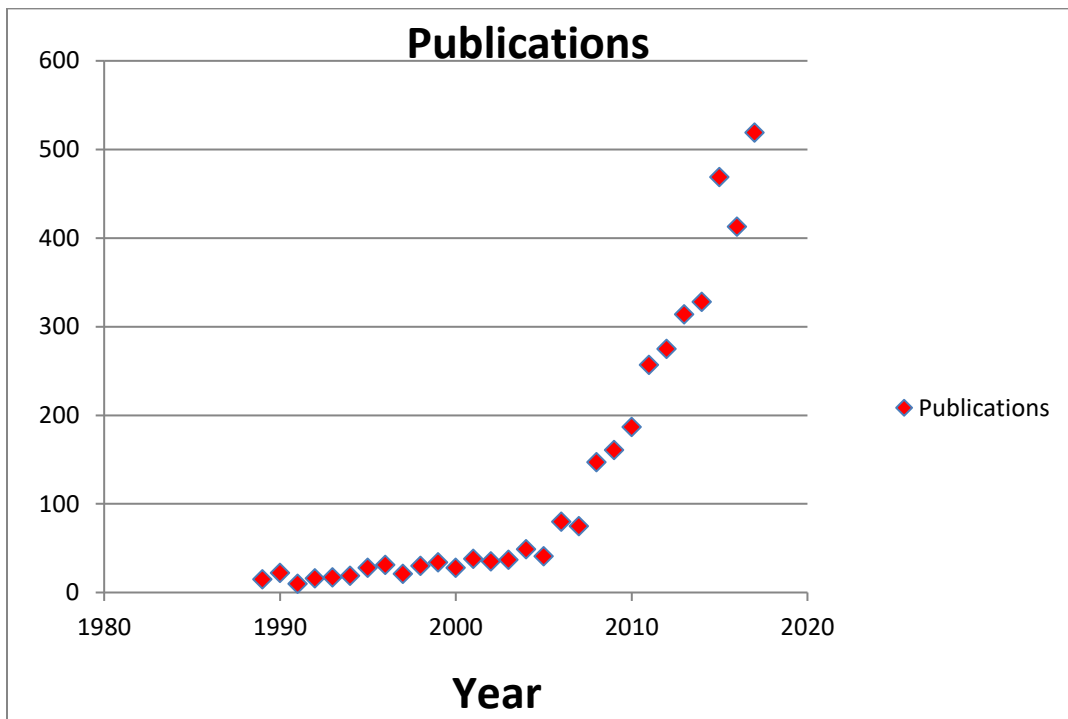
**Table 1 Year-Wise Research Output of India Christian Higher Education Institutions**

<b>S. No</b>	<b>Publication Year</b>	<b>Records</b>	<b>Cumulative Records</b>	<b>Percentage</b>	<b>Cumulative percentage</b>
1	1989	15	15	0.41	0.41
2	1990	22	37	0.60	1.01
3	1991	10	47	0.27	1.28
4	1992	16	63	0.43	1.71
5	1993	17	80	0.46	2.17
6	1994	19	99	0.51	2.68
7	1995	28	127	0.76	3.44
8	1996	31	158	0.84	4.28
9	1997	21	169	0.57	4.85

10	1998	30	199	0.81	5.66
11	1999	34	233	0.92	6.58
12	2000	28	261	0.76	7.34
13	2001	38	299	1.03	8.37
14	2002	35	334	0.95	9.35
15	2003	37	371	1.00	1.035
16	2004	49	420	1.33	11.68
17	2005	41	461	1.11	12.79
18	2006	80	541	2.16	14.95
19	2007	75	626	2.03	16.98
20	2008	147	773	3.98	20.96
21	2009	161	934	4.36	25.32
22	2010	187	1121	5.06	30.08
23	2011	257	1378	6.95	37.33
24	2012	275	1653	7.44	44.77
25	2013	314	1967	8.50	53.27
26	2014	328	2295	8.87	62.14
27	2015	469	2764	12.69	74.83
28	2016	413	3177	11.17	86
29	2017	519	3696	14.04	100
Total		3696		100.00	

Table 1 shows the comparison of the year-wise output of India Christian Higher Education Institutions during the period between 1989 to 2017. 2017 has the highest cumulative

percentage of 100% out of highest cumulative records of 3696 and followed in 1989 very lowest cumulative percentage 0.41% out of cumulative records of 15.



**Table 2 Annual Growth Rate**

S. No	Publication Year	Records	AGR
1	1989	15	0
2	1990	22	0.47
3	1991	10	-0.55
4	1992	16	0.60
5	1993	17	0.06
6	1994	19	0.12
7	1995	28	0.47
8	1996	31	0.11

9	1997	21	-0.32
10	1998	30	0.43
11	1999	34	0.13
12	2000	28	-0.18
13	2001	38	0.36
14	2002	35	-0.08
15	2003	37	0.06
16	2004	49	0.32
17	2005	41	-0.16
18	2006	80	0.95
19	2007	75	-0.06
20	2008	147	0.96
21	2009	161	0.10
22	2010	187	0.16
23	2011	257	0.37
24	2012	275	0.07
25	2013	314	0.14
26	2014	328	0.04
27	2015	469	0.43
28	2016	413	-0.12
29	2017	519	0.26
	Total	3696	

Table 2 shows that Annual Growth Rate of India Christian Higher Education Institutions during the period between 1989 and 2017. The AGR is the highest in 2008 (0.96) followed by 2006(0.95) and 1992 (0.60). The AGR is the lowest in 1991 (-0.55). There is a fluctuation in the AGR of Christian Higher Education Institution in India.

**Table 3 Author-wise Research Output of Indian CHEI ( Top 10)**

S. No	Author	Records	Percentage	Institution	Department
1	Joe IH	119	7.48	Mar Ivanios College, Trivandrum, Kerala	Physics
2	Solomon S	78	4.91	Karunya University, Coimbatore, Tamil Nadu.	Mechanical Engineering
3	Thomas JK	77	4.84	Mar Ivanios College, Trivandrum, Kerala	Physics
4	Philip D	66	4.15	Mar Ivanios College, Trivandrum, Kerala	Physics
5	Ojha DP	60	3.77	Andhra LoyolaCollege, Vijayawada, Andhra Pradesh	Physics
6	Jebas SR	52	3.27	Karunya University, Coimbatore, Tamil Nadu	Chemistry
7	Nandhakumar R	48	3.02	Karunya University, Coimbatore, Tamil Nadu	Chemistry
8	Vijayalakshmi K	46	2.89	Bishop Heber College, Tiruchirappalli	Physics



9	Enoch IVMV	42	2.64	Karunya University, Coimbatore, Tamil Nadu	Chemistry
10	Jayakumar VS	42	2.64	Mar Ivanios College, Trivandrum, Kerala	Physics

Table 3 shows that comparison of top 10 author-wise research output of Indian Christian Higher Education Institution author Joe IH gets highest 7.48% out of 119 records who is serving to Mar Ivanios College, Trivandrum, Kerala, and his subject is physics .

**Table 4 Journal-wise Research Output of India CHEI**

S. No	Journal	Records
1	SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY	139
2	JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS	81
3	ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE	60
4	ASIAN JOURNAL OF CHEMISTRY	53
5	JOURNAL OF MOLECULAR STRUCTURE	48
6	JOURNAL OF MOLECULAR LIQUIDS	38
7	JOURNAL OF THE INDIAN CHEMICAL SOCIETY	34
8	JOURNAL OF ALLOYS AND COMPOUNDS	33
9	RSC ADVANCES	32
10	JOURNAL OF RAMAN SPECTROSCOPY	31

The table 4 shows the comparison of Journal-wise research output of Indian Christian Higher Education Institution among top 10 journals first one is placed highest 139 records and the last journal is lowest 31 records respectively.

**Table 5 Document Type-wise Research Output of Indian CHEI**

S. No	Document Type	Records	Percentage	Cumulative Percentage
1	Article	3346	90.53	90.53
2	Article; Proceedings Paper	82	2.22	92.75
3	Meeting Abstract	73	1.98	94.73
4	Review	73	1.98	96.71
5	Letter	35	0.95	97.66
6	Editorial Material	24	0.65	98.31
7	Book Review	23	0.62	98.93
8	Note	16	0.43	99.36
9	Correction	9	0.24	99.6
10	Poetry	6	0.16	99.76
11	News Item	4	0.11	99.87
12	Biographical-Item	3	0.08	99.95
13	Article; Retracted Publication	1	0.03	99.98
14	Retraction	1	0.03	100
Total		3696	100.00	

Table 5 shows that comparison of document type-wise research output of Indian Christian Higher Education Institution among fourteen document articles, the journal article is placed highest 3346 records and lowest is Article; Retracted Publication and Retraction is 1 record.

**Table 6 Institution-wise Research Output of Indian CHEI (Top 10)**

<b>S. No</b>	<b>Institution</b>	<b>Records</b>	<b>State</b>	<b>h-index</b>
1	Karunya University, Coimbatore	934	Tamil Nadu	34
2	Mar Ivanios College, Trivandrum	365	Kerala	41
3	Madras Christian College, Chennai	281	Tamil Nadu	21
4	Bishop Heber College, Tiruchirappalli	257	Tamil Nadu	19
5	Christ University, Bangalore	215	Karnataka	14
6	Andhra Loyola College, Vijayawada	191	Andhra	16
7	Serampore College ,Serampore	150	West Bengal	21
8	Scottish Church College, Calcutta	135	West Bengal	17
9	Hislop College, Nagpur	97	Maharashtra	14
10	Ahmednagar College, Ahmednagar	93	Maharashtra	12

Table 6 shows the comparison of institution-wide research output of Indian top 50 Christian Higher Education Institution among top 10 institutions different states of India Karunya University, Coimbatore is placed highest 934 records and last institution is Ahmednagar College, Ahmednagar 93 records respectively.

## **CONCLUSION**

The research of higher education is playing a major role in strengthening the existing policies and theories. In higher education sector output of research by faculty is a most important one for the promotion of their institution and their career development. In a comparison of higher

education institution in India Christian higher education institutions and its contribution is greater need of the hour. It is a faculty member whose research productivity is required continuously based on the present nature. The present investigation has analyzed thoroughly the status of research productivity of faculty working in Christian higher education institutions during the period between 1989 and 2017. It is concluded that there was a gradual increase in research productivity among faculty working in Christian higher education institutions with respect of certain category. However certain backwardness was found some of the categories. In this regard the authority of Christian higher education institutions has to motivate their faculty member to produce the research productivity continuously every academic year and also send the faculty member to participate various conference and seminar outside of India and abroad. It provides exposures to them and shares their expertise to publish number of research productivity in their subject and an addition that authority of Christian higher education institutions has to organize the conference and seminar frequently in their college premises and promotes the interest among faculty member to increase the research productivity with every respect and appreciate the faculty member whose publication has a high impact factor. It provides high motivation among faculty members to produce number of publications in their subject concern. In Christian higher education institutions publication plays a major role in the development of the institution to obtain the highest grade. In development Christian higher education institutions the authority of it is an institution to motivate their faculty member in every respect to increase the research productivity.

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