

## SCIENTROMETRIC ANALYSIS OF INTERNATIONAL JOURNAL OF INFORMATION MANAGEMENT

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**Abstract:** - *The present study attempts on the Scientometric analysis of International Journal of Information Management. It is based on the Scopus database during 2013-2017. The present study is based on 474 articles published in International Journal of Information Management. The paper try to analysis the scientometrics variables such as Year - wise Distribution of Article, Authorship Pattern, Author Productivity, Rank List of Authors, Country-Wise Productivity, Institution Wise Distribution and Types of Document Wise Distribution of Articles in this Study.*

### Introduction

The aim of Scientometric is to provide quantitative characterization of scientific activity; Scientometric is branch of library and information sciences. Because of the particular importance of publication in scientific communities, it largely overlaps with Bibliometrics, which is quantitative analysis of media in any written form. A complex of quantitative mathematical and Statistical methods used to investigate such aspects as research staff, and to define evolutionary & prospectus of science (Bonitz, 1999). Scientometric is a very recent term. It is often used synonymously with the term Bibliometrics.

In addition to disciplines of measurement, Scientometric has strong connection with information and library of science as well as science policy. In the year of 1970 we saw the development of Scientometric as on operational activity. Applying Bibliometrics method to their own field, Scientometric confirm that their own domain, standing evolved as heterogeneous field in topics and practices. The research has been done on Scientometric analysis such as Year - wise Distribution of Article, Authorship Pattern, Author Productivity, Rank List of Authors, Country-Wise Productivity, Institution Wise

Distribution and Types of Document Wise Distribution of Articles in this Study.

**Data Analysis**

Data analysis of 474 articles of International Journal of Information Management during 2013 to 2017 has been given as follows:

**Year - wise Distribution of Article**

The word publication means act of publishing, and also refers to any printed copies. Productivity is an average measure of the efficiency of production. Table 1 provides the information about year wise published total no of articles 474 during, 2013-2017.

**Table No. 1 Year Wise Distribution of Article**

Sr No	Year	Total	%
1	2013	94	19.83
2	2014	78	16.46
3	2015	76	16.03
4	2016	127	26.79
5	2017	99	20.89
<b>Total</b>		<b>474</b>	<b>100.00</b>

**Figure No. 1 Year Wise Distribution of Article**

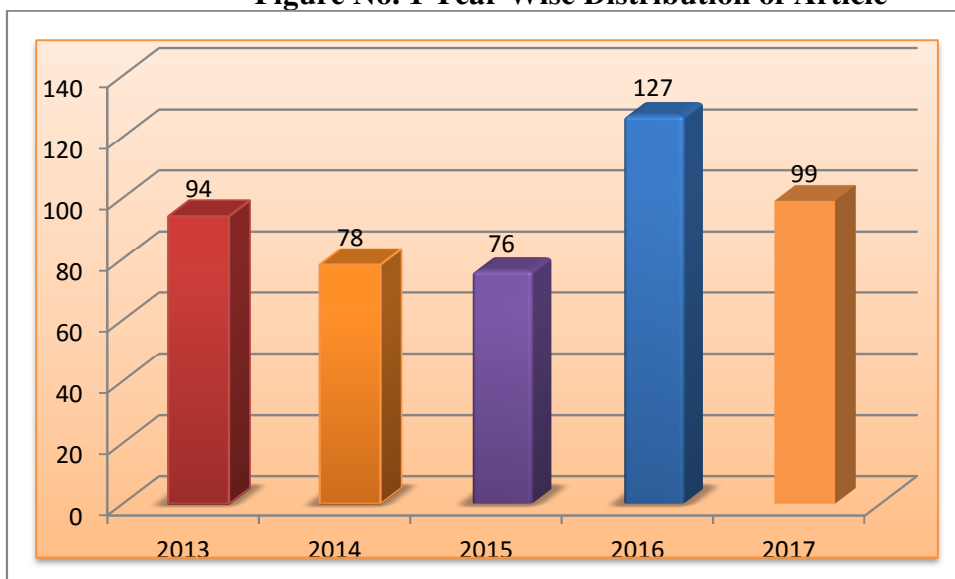


Table No. 1 and Figure No. 1 shows the year wise distribution of the papers published during the period of 2013-2017. The average number of articles was 474 published during 2013-2017. It observed that the contributions of earlier five years (2013-2017) the highest publication out of 474 articles 127 (26.79%) articles were published in 2016 and 78 (16.03%) articles lowest were in 2015 respectively

**Authorship Pattern**

The application of statistical techniques to the study of the subject related literature has many dimensions. Firstly, it is importance in understanding the structure of the subject field. In communication system, authors contributing to a subject field constitute a population. Within this population may emerge patterns

of authorship such as single and multiple studies in this area of statistical techniques (Scientometrics) have made useful discoveries which shed more light in our knowledge of structure of subject literatures. When two or more authors jointly produce a publication, the act is operationally termed as collaboration. Authorship pattern is important for scientists and researchers to know the research work, therefore, authorship pattern of scientific literature is analysed in order to determine the number of authors [both single and joint collaborative] contributing their work for analysis and statistical interpretation. Authorship pattern is analysis to determine the percentage of corporate, single and multiple authors and the number of anonymous papers. The following are trying to analysis of authorship pattern.

**Table No 2 Year-wise Authorship Pattern of Contribution**

Year	Single Author	Two Authors	Three Authors	Four Authors	Five Authors	Six Authors	Seven Authors	Eight Authors	NA	Total
2013	12	29	29	17	5	1	1	0	0	94
2014	20	19	23	10	4	1	1	0	0	78
2015	14	28	22	7	3	1	0	0	1	76
2016	11	25	41	32	12	1	3	2	0	127
2017	7	31	33	20	5	1	0	2	0	99
<b>Total</b>	64	132	148	86	29	5	5	4	1	474
<b>%</b>	<b>13.50</b>	<b>27.85</b>	<b>31.22</b>	<b>18.14</b>	<b>6.12</b>	<b>1.05</b>	<b>1.05</b>	<b>0.84</b>	<b>0.21</b>	<b>100.00</b>

Table No. 2 shows the authorship pattern of authors in year-wise during the year 2013-2017. The articles published 474 during the period 2013-2017. The highest numbers of authors were published in the year 2016 contributing 127 authors followed by 99 authors in the year 2017, 94 authors in the year 2013, 78 authors in the year 2014. The minimum 76 authors of were contributed in the year 2015. It is shown in the table no. 2

**Table No, 3 Author Productivity**

Year	Total No. of Papers	Total No. of Authors	AAPP	PPA
2013	94	263	2.80	0.36
2014	78	200	2.56	0.39
2015	76	185	2.43	0.41
2016	127	415	3.27	0.31
2017	99	295	2.98	0.34
<b>Total</b>	<b>474</b>	<b>1358</b>	<b>2.86</b>	<b>0.35</b>

The data pertaining to author productivity has presented in the table no. 3 shows that the total average number of authors per is 2.86 for the relatively equal average number of authors per article when compared the total average number of per article. The average productivity per author is 0.35 during the year 2013-

2017 productivity has been calculated with the following formula. Average Authors per Paper = No. of Authors/No. of Papers Productivity per Author= No. of Papers/No. of Authors.

**Table No 4 Rank List of Authors**

Sr. No.	Name of Authors	Total	%	Rank
1	Chang V	23	1.69	1
2	Lee H	8	0.59	2
3	Wang Y	8	0.59	2
4	Dwivedi Y.K	6	0.44	3
5	Gani A	6	0.44	3
6	Lee M.K.O	6	0.44	3
7	Sultan N	6	0.44	3
8	Walters R	6	0.44	3
9	Wills G	6	0.44	3
10	Mäntymäki M	5	0.37	4
11	Ogiela M.R	5	0.37	4
12	Popovic A	5	0.37	4
13	Sun Y	5	0.37	4
14	Aladwani A.M	4	0.29	5
15	Chen X	4	0.29	5
16	Cheung C.M.K	4	0.29	5
17	de Vasconcelos J.B	4	0.29	5
18	Hamari J	4	0.29	5
19	Khan S	4	0.29	5
20	Li X	4	0.29	5
21	Li Y	4	0.29	5
22	Mokhtar U.A	4	0.29	5
23	Rocha Á	4	0.29	5
24	Ugwoke B.U	4	0.29	5
25	Zhang J	4	0.29	5
26	Zhao D	4	0.29	5
27	Ahmed E	3	0.22	6
28	Anuar N.B	3	0.22	6
29	Davison R.M	3	0.22	6
30	He W	3	0.22	6
31	Hong I.B	3	0.22	6
32	Huang Q	3	0.22	6
33	Hwang Y	3	0.22	6
34	Kim H.W	3	0.22	6
35	Koo C	3	0.22	6
36	Laroche M	3	0.22	6
37	Lee C	3	0.22	6

38	Li L	3	0.22	6
39	Min J	3	0.22	6
40	Newman R	3	0.22	6
41	Ogiela L	3	0.22	6
42	Olaisen J	3	0.22	6
43	Palma Mendoza J.A.,	3	0.22	6
44	Pan S.L	3	0.22	6
45	Ramachandran M	3	0.22	6
46	Richard M.O	3	0.22	6
47	Salo J	3	0.22	6
48	Wu I.L	3	0.22	6
49	Yaqoob I	3	0.22	6
50	You I	3	0.22	6
51	Yusof Z.M	3	0.22	6
52	Zhang K.Z.K	3	0.22	6
53	Two Authors 2x112	224	16.48	7
54	Single Author 1x909	909	66.89	8
55	NA	1	0.07	9
<b>Total</b>		<b>1359</b>	<b>100.00</b>	

The above table 4 provides the list of authors in a ranked order based on authorship share when their collaboration is also taken into account irrespective of their sequence in publication. Chang V, who participated in a maximum of 23 publications and placed in the first rank and is the most productive author, while Lee H and Wang Y contributed 8 articles and stood at second rank followed by Dwivedi Y.K at third, fourth and fifth rank respectively.

### Country-Wise Productivity

The geographical distribution of articles provides information of the countries active in a particular subject field & their relative contribution. The following table provides the information about country wise distribution of productivity

**Table No 5 Rank List of country**

Sr. No.	Name of Country	Total	%	Rank
1	US	184	13.54	1
2	China	164	12.07	2
3	United Kingdom	158	11.63	3
4	South Korea	112	8.24	4
5	Taiwan	106	7.80	5
6	Malaysia	64	4.71	6
7	Canada	60	4.42	7
8	Spain	50	3.68	8
9	Portugal	39	2.87	9

10	Austria	33	2.43	10
11	France	27	1.99	11
12	Finland	25	1.84	12
13	Italy	24	1.77	13
14	Hong Kong	22	1.62	14
15	Brazil	21	1.55	15
16	Netherlands	20	1.47	16
17	Sweden	17	1.25	17
18	Poland	15	1.10	18
19	Turkey	15	1.10	18
20	Germany	13	0.96	19
21	Norway	13	0.96	19
22	Mexico	11	0.81	20
23	Ireland	10	0.74	21
24	Singapore	10	0.74	21
25	Iran	9	0.66	22
26	Ljubljana	9	0.66	22
27	Pakistan	9	0.66	22
28	Belgium	8	0.59	23
29	Kuwait	8	0.59	23
30	Saudi Arabia	8	0.59	23
31	Greece	7	0.52	24
32	Israel	7	0.52	24
33	Colombia	6	0.44	25
34	India	6	0.44	25
35	Nigeria	6	0.44	25
36	South Africa	6	0.44	25
37	Algeria	5	0.37	26
38	Denmark	5	0.37	26
39	Slovenia	4	0.29	27
40	UAE	4	0.29	27
41	Liechtenstein	3	0.22	28
42	Russia	3	0.22	28
43	Switzerland	3	0.22	28
44	Bangladesh	2	0.15	29
45	Croatia	2	0.15	29
46	Darussalam	2	0.15	29
47	Ghana	2	0.15	29
48	Jordan	2	0.15	29
49	Lebanon	2	0.15	29
50	New Zealand	2	0.15	29
51	Philippines	2	0.15	29

52	Romania	2	0.15	29
53	Serbia	2	0.15	29
54	Cote d'Ivoire	1	0.07	30
55	Egypt	1	0.07	30
56	Indonesia	1	0.07	30
57	Işık	1	0.07	30
58	Japan	1	0.07	30
59	Kazakhstan	1	0.07	30
60	Muscat	1	0.07	30
61	Oman	1	0.07	30
62	Thailand	1	0.07	30
63	NA	1	0.07	30
<b>Total</b>		<b>1359</b>	<b>100.00</b>	

From the table 5, it is found that there are a total 1359 contributors available from the analysis it has been observed that the highest numbers of contributors are from US with 184 articles and the percentage is (13.54%). Followed by China is second with 164 and the percentage (12.07%), and third number is United Kingdom with 158 articles and percentage (11.63%).

#### **Institution Wise Distribution**

Institution: it means the building where such an organization is situated, an organization or establishment founded for a specific purpose, such as a hospital and company, etc". The table following provides the information about distribution of authors according to institution wise.

**Table No 6 Rank List of Institutions**

Sr. No	Name of Institution	Total	%	Rank
1	Centre for Mobile Cloud Computing Research, Faculty of Computer Science and Information Technology, University of Malaya, LembahPantai, Kuala Lumpur, 50603, Malaysia	13	0.96	1
2	School of Management, University of Science and Technology of China, Hefe, China	13	0.96	1
3	College of Hotel & Tourism Management, Kyung Hee University, 26 Kyunghedae-ro, Dongdaemun-gu, Seoul, 02447, South Korea	10	0.74	2
4	Electronics and Computer Science, University of Southampton, Southampton, United Kingdom	10	0.74	2
5	School of Computing, Creative Technologies and Engineering, Leeds Beckett University, Leeds, LS6 3QS, United Kingdom	9	0.66	3
6	School of Economics and Management, Beihang University, 37 Xueyuan Rd, Beijing, 100191, China	9	0.66	3
7	Department of Information Management, National Sun Yat-sen University, No. 70, Lienhai Rd., Kaohsiung City, 80424, Taiwan	8	0.59	4
8	Department of Information Systems, City University of Hong Kong, Hong Kong	8	0.59	4
9	Department of Marketing, John Molson School of Business, Concordia	8	0.59	4

	University, 1455 de Maisonneuve West, Montre´al, Que´bec, H3G 1M8, Canada			
10	School of Economics and Management, BeiHang University, Beijing 100191, China	8	0.59	4
11	ALGORITMI Research Center, University of Minho, Guimarães, Portugal	7	0.52	5
12	Faculty of Computer Science and Information Technology, University of Malaya, Kuala Lumpur, 50603, Malaysia	7	0.52	5
13	Faculty of Computer Science and Information Technology, University of Malaya (UM), Kuala Lumpur, 50603, Malaysia	6	0.44	6
14	Graduate School of Information, Yonsei University, 134 Shinchon-Dong, Seodaemooon, Seoul 120-746, South Korea	6	0.44	6
15	International Business School Suzhou, Xi'AnJiaotong Liverpool University, Suzhou, China	6	0.44	6
16	School of Information Management, Central China Normal University, Wuhan	6	0.44	6
17	Xi'AnJiaotong Liverpool University, China	6	0.44	6
18	College of Business and Economics, Chung-Ang University, 221 Heuksuk-dong, Dongjak-ku, Seoul 156-756, South Korea	5	0.37	7
19	Department of Electrical and Computer Engineering, Clemson University, United States	5	0.37	7
20	Department of Information Management, National Chung Cheng University, 168 University Road, Ming-Hsiung, Chia-Yi, Taiwan	5	0.37	7
21	Health Awareness and Communication Department, IstitutoZooprofilatticoSperimentaledelleVenezieViale dell'Università 10, Legnaro (PD)35020, Italy	5	0.37	7
22	Interactive Coventry Limited, Coventry University Technology Park, Puma Way, Coventry CV1 2TT, United Kingdom, United Kingdom	5	0.37	7
23	Management Engineering Department, Universidade Federal de Pernambuco, P.O. Box 7462, Recife, PE 50722-970, Brazil	5	0.37	7
24	School of Business, Yonsei University, 50 Yonsei-ro, Seodaemun-gu, Seoul, 120-749, South Korea	5	0.37	7
25	School of Computing, Informatics and Media, University of Bradford, Richmond Road, Bradford, BD7 1DP, United Kingdom	5	0.37	7
26	School of Electronics and Computer Science, University of Southampton, Southampton, United Kingdom	5	0.37	7
27	School of Engineering, Centre for Technology and Geosciences, Universidade Federal de Pernambuco, Recife PE, Caixa Postal 5125, CEP: 52.070-970, Brazil	5	0.37	7
28	Southwestern University of Finance and Economics, China	5	0.37	7
29	University of Toronto, School of Environment, Rm 1016V, 33 Willcocks St., Toronto, ON M5S 3E8, Canada	5	0.37	7
30	Department of Aviation and Supply Chain Management, Raymond J. Harbert College of Business, Auburn University, 403 Lowder Business Building, 405 W. Magnolia Ave, Auburn, AL 36849, United States	4	0.29	8
31	Department of Computer Science, National TsingHua University, Taiwan	4	0.29	8
32	Department of Computer Science, University of Central Florida, Orlando, FL 32816, United States	4	0.29	8
33	Department of Information Management, National Taichung University of Science and Technology, 129 San-min Road, Taichung 40401, Taiwan	4	0.29	8



34	Department of Information Systems and Cyber Security, University of Texas at San Antonio, 1 UTSA Circle, San Antonio, TX 78249, United States	4	0.29	8
35	Department of Information Systems, School of Computing, National University of Singapore, 13 Computing Drive, #COM2-01-02, Singapore 117417, Singapore	4	0.29	8
36	Department of Marketing and Market Research, University of Granada, Campus Cartuja, 18011 Granada	4	0.29	8
37	Department of QM & IS, College of Business Administration, Kuwait University, Kuwait	4	0.29	8
38	Faculty of Computer Science and Information Technology, University of Malaya, LembahPantai, Kuala Lumpur, 50603, Malaysia	4	0.29	8
39	Faculty of Information Science and Technology, UniversitiKebangsaan Malaysia, Bandar BaruBangi, Selangor, 43600, Malaysia	4	0.29	8
40	Kyung Hee University, KOR, South Korea	4	0.29	8
41	Lancashire Business School, University of Central Lancashire, Preston, United Kingdom	4	0.29	8
42	Medical Library, College of Medicine, Univeristy of Nigeria, Nigeria	4	0.29	8
43	National Centre for Computer Animation, Bournemouth University, PooleBH12 5BB, United Kingdom	4	0.29	8
44	North Carolina State University, 201 Winston Hall, Raleigh, NC, United States	4	0.29	8
45	School of Business Administration, Southwestern University of Finance and Economics, Chengdu, Sichuan Province, China	4	0.29	8
46	School of Economics and Management, Beihang University, Haidian District, 37#Xueyuan Road, Beijing, 100191, China	4	0.29	8
47	School of Management, University of Science and Technology of China, No. 96, JinZhai Road, Baohe District, Hefei, Anhui 230026, China	4	0.29	8
48	School of Management, Xi'an Jiaotong University, Xi'an, 710049, China	4	0.29	8
49	SmartState Center for Healthcare Quality, Department of Health Promotion, Education, and Behavior, Arnold School of Public Health, University of South Carolina, 915 Greene Street, Columbia, SC 29208, United States	4	0.29	8
50	UniversitiKebangsaan Malaysia, Bangi, Selangor, 43600, Malaysia	4	0.29	8
51	University Campus Suffolk, School of Business, Leadership and Enterprise, Ipswich, Suffolk IP4 1QJ, United Kingdom	4	0.29	8
52	University of Lyon, CNRS, INSA-Lyon, LIRIS, UMR5205F-69621, France	4	0.29	8
53	NA	1	0.07	9
54	Three time Institution 3x61	183	13.47	10
55	Two time Institution 2x172	344	25.31	11
56	Single time Institution 1x539	539	39.66	12
<b>Total</b>		<b>1359</b>	<b>100.00</b>	

It can be observed from Table 6 that, there were **1359** articles involved in this study. Centre for Mobile Cloud Computing Research, Faculty of Computer Science and Information Technology, University of Malaya, LembahPantai, Kuala Lumpur, 50603, Malaysia and School of Management, University of Science and Technology of China, Hefe, China are 13 publications and percentage (0.96%) followed by College of Hotel & Tourism Management, Kyung Hee University, 26 Kyunghedae-ro, Dongdaemun-gu, Seoul, 02447, South Korea and Electronics and Computer Science, University of Southampton, Southampton, United Kingdom 10 publication and percentage (0.74%), 183 (13.47%) institution authors not mentioned there institutions name.

**Table No 7 Types of Document Wise Distribution of Articles**

Sr. No	Document Type	Total	%
1	Article	435	91.77
2	Review	17	3.59
3	Article in Press	12	2.53
4	Editorial	8	1.69
5	Erratum	2	0.42
<b>Total</b>		<b>474</b>	<b>100.00</b>

**Figure No 2 Types of Document Wise Distribution of Articles**

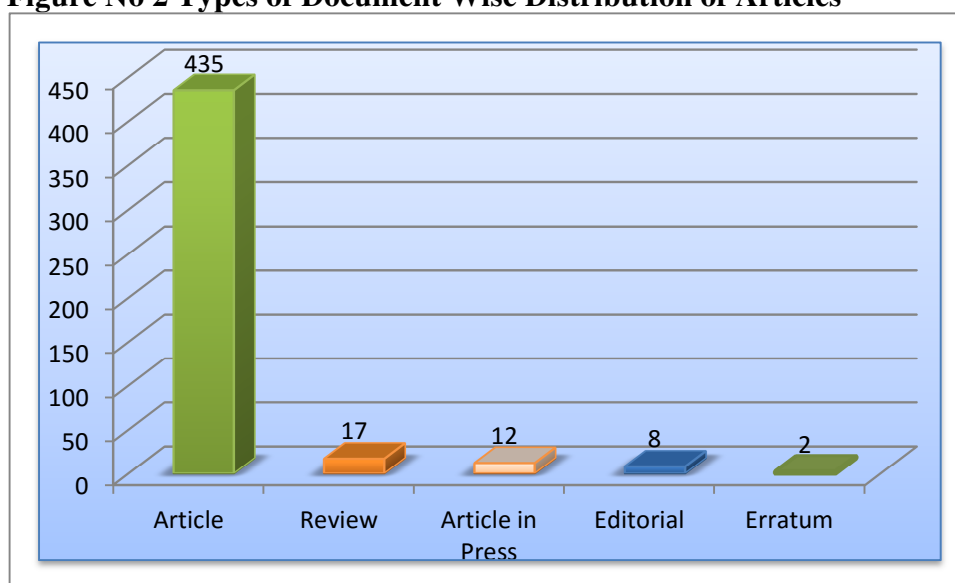


Table No. 7 and Figure No. 2 shows the Types of Document Wise Distribution of Articles published during the period of 2013-2017. The average number of articles was 474 published during 2013-2017. It observed that the contributions of earlier five years (2013-2017) the articles are 435 (91.77%), followed by Review 17 (3.59%), Article in Press 12 (2.53%), Editorial 8, (1.69%) and Erratum 2 (0.42%) respectively

**Conclusion and Findings**

The Scientometrics method has been used in order to understand, analyse, and evaluation the

structure of publications of International Journal of Information Management in India during the year 2013-2017. The variables or components of

Scientometrics method such as Geographical Contribution, The Authorship Pattern Analysis, The single and joint authorship: time series analysis, The author productivity, Institute wise contribution, and year-wise growth of literature etc.

### **Findings**

The findings have been presented under the following headings.

#### **Year Wise Distribution of Article**

The average number of articles was 474 published during 2013-2017. It observed that the contributions of earlier five years (2013-2017) the highest publication out of 474 articles 127 (26.79%) articles were published in 2016 and 78 (16.03%) articles lowest were in 2015 respectively

#### **Year-wise Authorship Pattern of Contribution**

The articles published 474 during the period 2013-2017. The highest numbers of authors were published in the year 2016 contributing 127 authors followed by 99 authors in the year 2017, 94 authors in the year 2013, 78 authors in the year 2014. The minimum 76 authors of were contributed in the year 2015. It is shown in the table no. 2

#### **Author Productivity**

the total average number of authors per is 2.86 for the relatively equal average number of authors per article when compared the total average number of per article. The average productivity per author is 0.35 during the year 2013-2017

#### **Rank List of Authors**

provides the list of authors in a ranked order based on authorship share when their collaboration is also taken into account irrespective of their sequence in publication. Chang V, who participated in a maximum of 23 publications and placed in the first rank and is the most productive author, while Lee H and Wang Y contributed 8 articles and stood at second rank followed by Dwivedi Y.K at third, fourth and fifth rank respectively.

#### **Rank List of Country**

it is found that there are a total 1359 contributors available from the analysis it has been observed that the highest numbers of contributors are from US with 184 articles and the percentage is (13.54%). Followed by China is second with 164 and the percentage (12.07%), and third number is United Kingdom with 158 articles and percentage (11.63%).

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### References

- Hood, W.W. & Wilson, C. (2001).The literature of bibliometrics, scientometrics, and informetrics.*Scientometrics*, Volume 52, Issue 2, Page 291–314.
- Lolis, S. F. &et. al. (2009). Scientometric analysis of energetic ecology: Primary production of aquatic macrophytes. *Maringá*, Volume 31, Issue 4, Page 363-369.
- Mooghali, A., Alijani, R., & et al (2011).Scientometric Analysis of the Scientometric Literature.*International Journal of Information Science and Management*, Vol. 9, Issue 1
- Asad Abdi , Norisma Idris , Rasim M Alguliyev , Ramiz M Aliguliyev (2017). Bibliometric
- Analysis of IP&M Journal (1980–2015) *Journal of Scientometric Res* Volume 7, Issue , Page 54–62
- Sanku Bilas Roy & Moutusi Basak (2013). JOURNAL OF DOCUMENTATION: A

### BIBLIOMETRIC STUDY *Library Philosophy and Practice (e-journal)*

- Garfield and Trumpiene, (1972), Authorship and citation pattern in management science in comparison with operational research, *Scientometrics*, Volume 53, Page 337-340
- Hargens, L, (1988). The literature of bibliometrics, Scientometrics, and information. *Scientometrics*, Volume 52, Page 291-314.
- Wouters, (2006). *Scientometrics Analysis. Journal of Library and Information Technology*. Volume 1, Issue 1, Page 5-9.
- Nicolsions, (2002), *Scientometrics study of laser patent literature, Scientometrics* Volume 43, Page 443-454.