

Bibliometric Analysis of the Global Traditional Knowledge during 1989-2015

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Abstract: - *The study examines research performance of global Traditional Knowledge during the period of 1989 to 2015. A total of 24347 records were obtained for analyzing the measure of type documents, the growth of publications, authorship pattern, geographical distribution, institution wise distribution and the journal wise distribution. The result of the study is the highest publication were 2465 in 2015, among the productivity of authors during the period of study, Pieroni A and Zhang Y is the most productive authors who published each 40 papers with first place, and among countries, the USA produced 7844 of articles and it occupied the first place.*

Keyword: Traditional knowledge; bibliometric; research growth;

INTRODUCTION

Traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, Traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Sometimes it is referred to as an oral traditional for it is practiced, sung, danced, painted, carved, chanted and performed down through millennia. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general (CBD).

REVIEW OF LITERATURE

A survey of the research trends is felt necessarily desirable to identify if any similar study already exists and also with a view to get knowledge of the process of application of quantitative analysis. Gunasekaran and Balasubramani (2012) analysed the Artificial intelligence research output carried out during the year 1973 – 2011 on different parameters including authorship pattern, growth, rank with global publication, institutions contribution, most productivity journals were analysed. Signore & Annovazzi (2004) carried out a research on Medline covering 1-year period to evaluate the number and the scientific “weight” of the Nuclear Medicine papers published from European as compared with other countries. Harsh and Mishra (2011) carried out an analysis of the literature on Bio-fuel. The purpose was to study the periodic growth of literature, distribution of authorship, distribution of subject, bibliographical forms of literature, productivity ranking, and geographic origin of literature on the subject. According to Lee et al. (2011) the correlation between GDP and research publications is an important issue in scientometrics. They provided further empirical evidence connecting revealed comparative advantage in national research with effects on Economic productivity. Mulla and Chandrashekara (2011) identified some bibliometrics indicators of 2253 articles published on industry and trade during 2002-2006. The online database of the Indian Science Abstract was the main source for their study.

OBJECTIVE OF THE STUDIES

The major objectives are framed with the exclusive notion of the present study as follow; to identify the form of publications; to examine the year wise distribution of publications; to determine the authorship pattern; to identify the geographical distribution of publications; to study institution wise distribution of publications and to identify the journal wise distribution of publications

METHODOLOGY AND SOURCES

The required data was collected from Web of Science database for the period 1989-2015. It can be seen that 24347 bibliographic records of contribution to Traditional Knowledge over the period of twenty six years. We used the term Traditional Knowledge* to search through WOS databases. A total of 24347 publications were identified in WOS database. Finally, the evaluation was based on parameters including authors, countries, institutions, growth rate, document types, and subject areas.

DATA ANALYSIS AND INTERPRETATIONS

Figure 1: Form-Wise Distribution of Publications

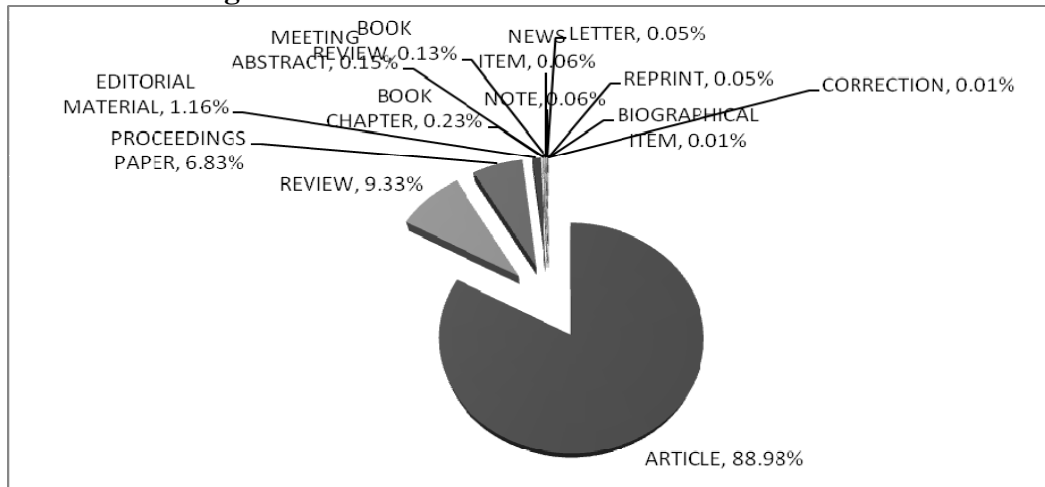


Figure 1 shows the share of journal articles is the most prominent bibliographic form of publication and it occupies 88.98% (21665) of total publications. Review with 2272 (9.33%) contributions, Proceedings paper with 1663 (6.83%) contributions, Editorial Material with 282 (1.16%) and followed by remaining bibliographic forms.

Figure 2: Year Wise Distribution of Publications

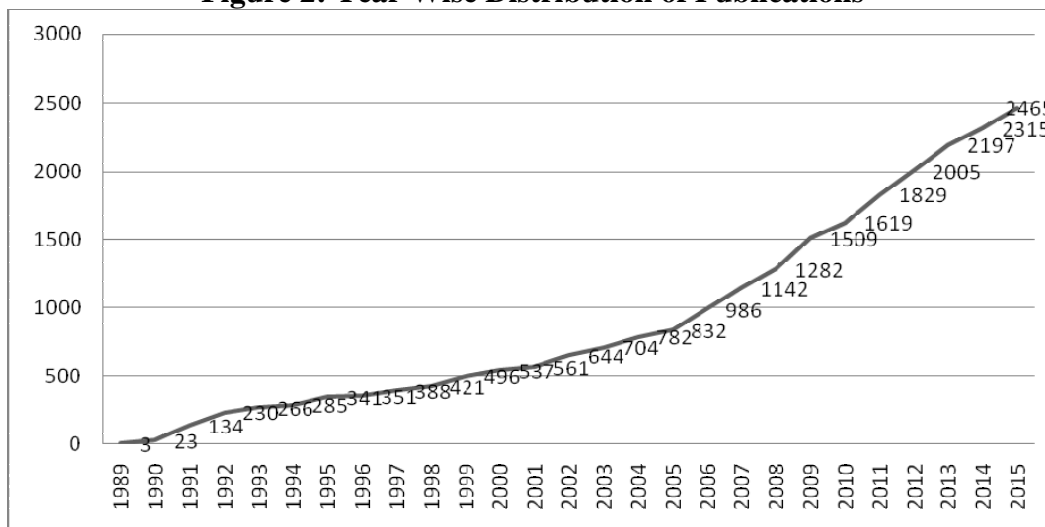


Figure 2 clearly that during the period 1989 - 2015 a total of 24347 publications were published at Global level. The highest publication were 2465 in 2015 followed by 2315 papers in 2014, 2197 papers in 2013, 2005 papers in 2012, 1829 papers in 2011, 1619 papers in 2010, 1509 papers in 2009, 1282 papers in 2008 and 1142 papers in 2007. The lowest publication is less than 1000 from 1989-2007. It also clearly shows that the year 2015 and 2014 are the most productive year, during the sample years.

Table 1: Author Wise Distribution of Publications

Sl. No	Authors	Count	Percentage
1	Pieroni A	40	0.16%
2	Zhang Y	40	0.16%
3	Wang J	37	0.15%
4	Heinrich M	34	0.14%
5	Reyes-Garcia V	34	0.14%
6	Liu J	31	0.13%
7	Singh RK	31	0.13%
8	Wang Y	30	0.12%
9	Berkes F	28	0.12%
10	Li Y	28	0.12%
11	Alves RRN	27	0.11%
12	Albuquerque UP	26	0.11%
13	Singh A	26	0.11%
14	Liu Y	25	0.10%
15	Bussmann RW	24	0.10%
16	Li J	22	0.09%
17	Quave Cl	22	0.09%
18	De Albuquerque UP	21	0.09%
19	Kim H	21	0.09%
20	Kumar S	21	0.09%

Table 1 depicts the productivity of authors during the period of study. Pieroni A and Zhang Y is the most productive authors who published each 40 papers with first place, out of 24347 authors and the table shows only top 20 authors. Wang J with 37 articles comes second place, Heinrich M and Reyes-Garcia V with each 34 articles come third place. The author “Liu J and Singh RK” has published the each 31 articles with fourth place and followed by remaining authors listed in the table.

Figure 3: Country wise Distribution of Publications

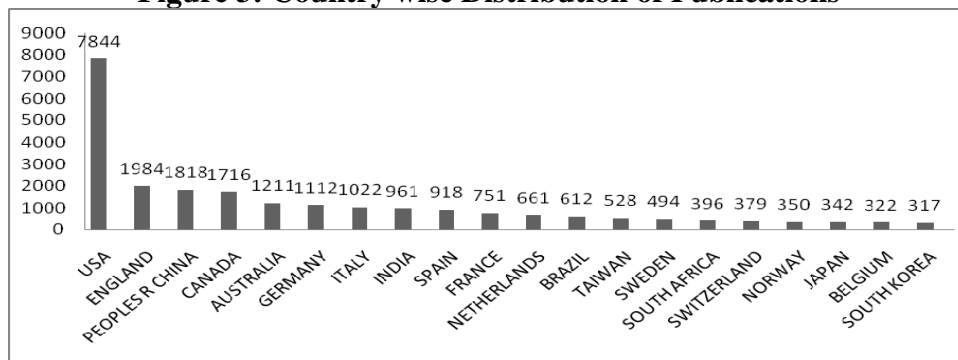


Figure 3 shows that during the period 1989 - 2015 a total of 24347 publications were published at Global level, among countries, the USA produced 7844 of articles and it occupied the first

place. Followed by England, China, Australia, Germany and Italy have more than 1000 articles produced in this field. India, Spain, France, Netherlands and Brazil were contributing more than 500 articles. Sweden, South Africa, Switzerland, Norway, Japan, Belgium and South Korea were contributing each below 500 articles in the field of traditional Knowledge.

Table 2: Institution Wise Distribution of Publications

Sl. No	Organizations	Count	Percentage
1	University of Toronto	226	0.93%
2	Chinese Academy of Science	214	0.88%
3	Harvard University	205	0.84%
4	University of British Columbia	180	0.74%
5	University of Illinois	164	0.67%
6	University of Washington	159	0.65%
7	University of Wisconsin	151	0.62%
8	University of Michigan	149	0.61%
9	University of North Carolina	149	0.61%
10	McGill University	132	0.54%
11	University of Calif Los Angeles	128	0.53%
12	Stanford University	121	0.50%
13	University of Alberta	118	0.49%
14	University of Sydney	118	0.49%
15	Ohio State University	116	0.48%
16	University of Melbourne	114	0.47%
17	University of Minnesota	112	0.46%
18	University Of Queensland	108	0.44%
19	University Of Colorado	107	0.44%
20	University Of Florida	104	0.43%

Table 2 mentioned Institution-wise research productivity. It is noted that institutions contributed 24347 of the total research productivity. The University of Toronto contributed the highest number of research publications 226 (0.93%) respectively and followed by Chinese Academy Science, Harvard University, University of British Columbia, University of Illinois, and University of Washington.

Table 3: Journal Wise Distribution of Publications

Sl. No	Title of the Journal	Count	Percentage	SJR
1	Journal of Ethnopharmacology	489	2.01%	1.07
2	Indian Journal of Traditional Knowledge	311	1.28%	0.42
3	Journal of Ethnobiology and Ethnomedicine	276	1.13%	0.51
4	Lecture Notes in Computer Science	256	1.05%	0.34
5	Plos One	156	0.64%	1.3
6	Expert Systems with Applications	150	0.62%	2

7	Lecture Notes in Artificial Intelligence	130	0.53%	-
8	Ecology and Society	110	0.45%	1.46
9	Human Ecology	94	0.39%	0.9
10	Computers Education	89	0.37%	-
11	Economic Botany	89	0.37%	1.47
12	Social Science Medicine	89	0.37%	-
13	Academic Medicine	82	0.34%	1.66
14	Arctic	68	0.28%	0.47
15	Evidence Based Complementary and Alternative Medicine	68	0.28%	-
16	Medical Teacher	67	0.28%	1.51
17	Knowledge Based Systems	59	0.24%	-
18	Forest Ecology and Management	56	0.23%	1.32
19	Journal of Advanced Nursing	55	0.23%	0.84
20	Bmc Public Health	53	0.22%	1.14

Table 3 show that Journal Wise Distribution of Publications, Out of top 20 journals, *Journal of Ethnopharmacology* has published the highest number of articles 489 (2.01%); 1.07 SJR scaled. It dominates in first place of research output in this field. *Indian Journal of Traditional Knowledge* has 311(1.28%); 0.4291 occupies the second position. *Journal of Ethnobiology and Ethnomedicine* has 276 (1.13%); 0.51 in third rank, *Lecture Notes in Computer Science* has 256 (1.05%); 0.34 of publications, it is in the fourth position of brought research output, followed by *Plos One*, *Expert Systems with Applications*, *Lecture Notes in Artificial Intelligence*, *Ecology and Society*, *Human Ecology*, *Computers Education*, *Economic Botany*, *Social Science Medicine* and others listed above table occupies next position accordingly.

FINDINGS AND CONCLUSION

Based on the analysis undertaken the present study reveals major findings; the share of journal articles is the most prominent bibliographic form of publication and it occupies 88.98% (21665) of total publications. The highest publication is 2465 in 2015 and the lowest publication is less than 1000 from 1989-2007, Among the productivity of authors during the period of study, Pieroni A and Zhang Y is the most productive authors who published each 40 papers with first place, Among countries, the USA produced 7844 of articles and it occupied the first place, The University of Toronto contributed the highest number of research publications 226 (0.93%) respectively, *Journal of Ethnopharmacology* has published the highest number of articles 489 (2.01%); 1.07 SJR scaled.

REFERENCES

1. Adithya Kumari, H, Madhusudhan, C M & Hydar Ali. (2015). A Bibliometric study of world research output on information literacy in the field of library and information

- science during 1999-2013. *E-Library Science Research Journal*, 3(9), 1-10. ISSN: 2319-8435
2. CBD.(n.d.). Convention on Biological Diversity. Retrieved February 06, 2016, from <https://www.cbd.int/traditional/intro.shtml>
 3. Gunasekaran, M., & Balasubramani, R. (2012). Scientometric Analysis of Artificial Intelligence Research Output: An Indian Perspective. *European Journal of Scientific Research*, 70(2), 317-332.
 4. Harsh Bardhan Arya and J. K. Mishra (2011). "Growth of Bio-fuel Literature Analytical study", *SRELS Journal of Information Management* : 48(3)349-355
 5. Lee, L., Lin, P., Chuang, Y., & Lee, Y. (2011). Research output and economic productivity: a Granger causality test. *Scientometrics*, 89(2), 465-478. Retrieved January 15, 2012, from the Springer link database.
 6. Mulla and M. Chandrashekara (2011). "Mapping of Industrial and Trade Literature (2002-2006): A Bibliometric Study". *International Journal of Library Science*. 3(J11)
 7. Signore, A., & Annovazzi, A. (2004). Scientific production and impact of nuclear medicine in Europe: How do we publish? *European Journal of Nuclear Medicine and Molecular Imaging*. 31 (6), 882-886.

