

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

---

Winter 12-15-2021

## A Scientometric Study of Journal of Librarianship & Information Science (JoliS) During 2007-2016

Dinesh Kumari Kundu

*BPSITTR, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonapat, Haryana- India,*  
dkbpsmv1285@gmail.com

Nirmal Kumar Swain

*Deptt. of Library & Information Science, Maharshi Dayanand University, Rohtak, Haryana- India,*  
drnkswain@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Cataloging and Metadata Commons](#)

---

Kundu, Dinesh Kumari and Swain, Nirmal Kumar, "A Scientometric Study of Journal of Librarianship & Information Science (JoliS) During 2007-2016" (2021). *Library Philosophy and Practice (e-journal)*. 6688.  
<https://digitalcommons.unl.edu/libphilprac/6688>

# A SCIENTOMETRIC STUDY OF JOURNAL OF LIBRARIANSHIP & INFORMATION SCIENCE (JoLiS) DURING 2007-2016

Ms Dinesh Kumari<sup>1</sup> & Prof. Nirmal Kumar Swain<sup>2</sup>

<sup>1</sup>Librarian, BPSITTR, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonapat, Haryana-India

E-mail:dkbpsmv1285@gmail.com

<sup>2</sup>Head, Dept. of Library & Information Science, Maharshi Dayanand University, Rohtak, Haryana-India

E-mail:drnkswain@gmail.com

## ABSTRACT

*The present study is based on the scientometric analysis of 218 documents published in JoLiS from 2007 to 2016. The study explored various parameters of scientometrics such as total output ; year wise distribution and growth of research output; future growth of publications; degree of collaborations among authors, most prolific author, top ten countries in terms of research output and top cited article of the journal. The study found that most productive years were 2015 and 2016 with 28 (12.84%) publications and the least productive year was 2009 with 15(6.88%) publications. The study explored that the estimated future growth of JoLiS publications increased from 28 in the year 2016 to 53 in the year 2035 which shows that rate of growth is positive in relation to the year wise publications. The degree of collaboration among authors of JoLiS shows that authors of JoLiS have more interest in joint contribution rather than single contribution. The study explores that the United Kingdom is on top in terms of contribution followed by USA. It is found that Aharony N and Shenton AK have contributed maximum articles 7 (3.21%) each. The paper authored by Bryant J., Matthews G. and Walton G., published in the year 2009 is on top by receiving the highest number of citations.*

**Keywords:**Research Output; Scientometrics; Journal of Librarianship & Information Science; Scopus; Degree of collaboration; authorship pattern.

## 1 INTRODUCTION

Journals are the scholarly literature of any discipline and the study of measurement of these publications provides the blue-print of that field. Studies produced in these publications highlights the emerging trends, drawbacks and other prospective in a particular area of research. To assess the scientific performance, scientometric methods are a few most significant measurements of scientific

literature. In the current study, scientometric analysis of one journal of Library and Information Science titled Journal of Librarianship and Information Science (JoLiS) is carried out to assess the quantitative measurements of LIS discipline as journals of a specific discipline are considered as the sensitive indicators to know the latest trends of that discipline.

## 1.1 Scientometric

The “Scientometric” term has been used first as a translation of the Russian word. In 1969 V.V. Nalimov and Z.M. Mulchenko used the Russian word ‘naukometriya’ (first translated as science metrics) and explored the term ‘Scientometric’ in their book titled “Scientometric: Studying Science as an Information Process” as a “complex of quantitative methods, which are used to investigate the process of science”. Later on, T. Braun popularized the term with the foundation of the journal “Scientometric”. Beck (1978) in the editorial of the first issue of “Scientometric” stated Scientometric as “the study of measurement of scientific and technological progress”.

Tague-Sutcliffe (1992) describes “Scientometric is the study of the quantitative aspects of science as a discipline or economic activity.”

Generally, Scientometric is usually performed using bibliometrics that is a way of measuring the influence of scholarly literature. Bibliometrics and Scientometric are a bunch of strategies to measure the production, dissemination and use of scientific information to better understand the mechanism of scientific literature.

## 1.2 Source journal

Journal of Librarianship and information Science (JoLiS) is the peer-reviewed quarterly journal of SAGE publishing. Formerly (until 1991) it was titled “Journal of Librarianship. Bowker-Saur, Later in 1990 it was acquired by a publisher with the name “*Journal of Librarianship*” and brought it with new title “Journal of Librarianship and information Science” along with latest formatting and design. Cambridge Scientific Abstracts owned it since 2002



and after that SAGE Publications started publishing it from 2004. JoLiS publishes original papers review articles and book review from practicing librarians, information workers and academics which focuses on library science profession. Anne Goulding from Victoria University of Wellington, New Zealand is working as editor in this journal. It is indexed in many reputed

databases. The first volume of this journal published in the year 1969. Since then it is publishing regularly. Currently it has completed its 52 volume in 2020. It has ISSN: 0961-0006 (in print mode) and ISSN: 1741-6477 (online mode). The present study covers the bibliometric analysis of the journal between the years 2007 to 2016.

## 2 OBJECTIVES

The study has been conducted with taking following objectives in to consideration;

- to identify the total output of JoLiS journal during 2007-2016;
- to identify the growth pattern and the future trend of JoLiS;
- to identify the authorship pattern and degree of collaboration of JoLiS authors;
- to identify the most prolific authors ,Top ten countries,and top cited articles of JoLiS

## 3 REVIEW OF RELATED LITERATURE

Some important literature reviews related to scientometric studies are as under:

**Jawad Muhammad et al. (2021)** in their research paper titled “Mapping the research output of Journal of Social Sciences and Humanities (JSSH): A Bibliometric Study” described the trends of research published in the JSSH journal from 1995 to 2019. The study analyzed the year wise distribution of papers , authorship pattern, average number of references per article, year-wise distribution of citations etc. The study encourages the researchers to map the statistical output of research journals published in their countries especially the developing countries.

**Grinev (2020)** in the study entitled “The disadvantages of using Scientometric indicators in the digital age” explored that main Scientometrics indicators like total number of publications, citation index and h-index can give a picture of the scholarly contribution.. There is a requirement to expand the list of Scientometric indicators. Author developed a new Scientometric indicator named ‘quartile index’ which can used as an auxiliary tool for indirectly determining the quality of publications of a researcher, department, division, or university as a whole and recommended that some more indicators may be developed.

**Abdi et al (2018)** in their research “Bibliometric analysis of IP & M journal (1980-2015)” conducted a bibliometric analysis of journal from 1980-2015. The analysis covers year-wise distribution of publications, form wise classification, authorship pattern, degree of collaboration, institution wise distribution, geographical distribution, top ten prolific authors, top ten institutions and top twenty four (24) prolific countries in terms of their contribution. The study also demonstrated the yearly distribution of citations, Average citations per items (ACPI), Average

Citations per Year and age of journals cited. To calculate the collaboration among authors, Subramanyam (1983) formula was followed in the study. This bibliometric analysis demonstrated merits and demerits of journal which will be useful for its further development.

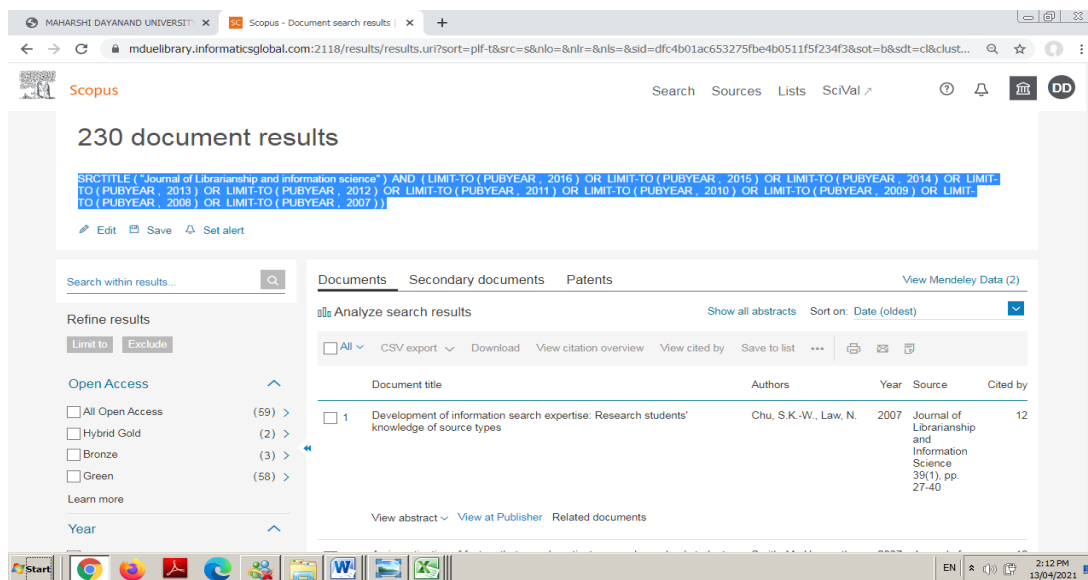
**Hajam (2017)** in the research paper entitled “Scientometric analysis of Journal of Social Work from 2001 to 2010” studied the journal’s yearly productivity through various perspectives like volume wise, issue wise, author wise, institution-wise, country-wise etc.. The study explored that single authors are dominating in authorship pattern and U.K. has become at top in country-wise analysis with 43.8% contribution. K. Subramanyam’s formula was used to determine the degree of collaboration in quantitative analysis. In the institutional contribution 88.8% articles were published only at University level. The study found the average length of pages of publications as 21.3% during all these years. The study showed that the journal has shown remarkable growth from all sides and has remained a reliable and useful resource of information.

A few other studies conducted by Kumari, D. & others (2019) etc. were also consulted for interpreting and analysis of data.

#### **4 DATA SELECTION AND METHODOLOGY**

The publications of JoLiS from 2007 to 2016 have been analyzed. The data has been extracted from the largest abstracting and citation database of peer-reviewed literature i.e. SCOPUS database. The data was extracted from the SCOPUS using the strings “*SRCTITLE ( "Journal of Librarianship and information science" ) AND ( LIMIT-TO ( PUBYEAR , 2016 ) OR LIMIT-TO ( PUBYEAR , 2015 ) OR LIMIT-TO ( PUBYEAR , 2014 ) OR LIMIT-TO ( PUBYEAR , 2013 ) OR LIMIT-TO ( PUBYEAR , 2012 ) OR LIMIT-TO ( PUBYEAR , 2011 ) OR LIMIT-TO ( PUBYEAR , 2010 ) OR LIMIT-TO ( PUBYEAR , 2009 ) OR LIMIT-TO ( PUBYEAR , 2008 ) OR LIMIT-TO ( PUBYEAR , 2007 )*”.

As a result, 230 total documents appeared. Out of 230 documents, 207 were articles and 15 were reviews. The study was confined to articles as shown in SCOPUS categories but after cross-checking the table of contents from JoLiS at SAGE home page, the researcher selected only 218 articles which match from the JoLiS’s ‘article’ category by excluding book review, editorial, note, appreciations etc. as per journal categorization itself. An integrated list was saved as per categorization. All analysis was done on this integrated publication list which was saved in the SCOPUS database account.

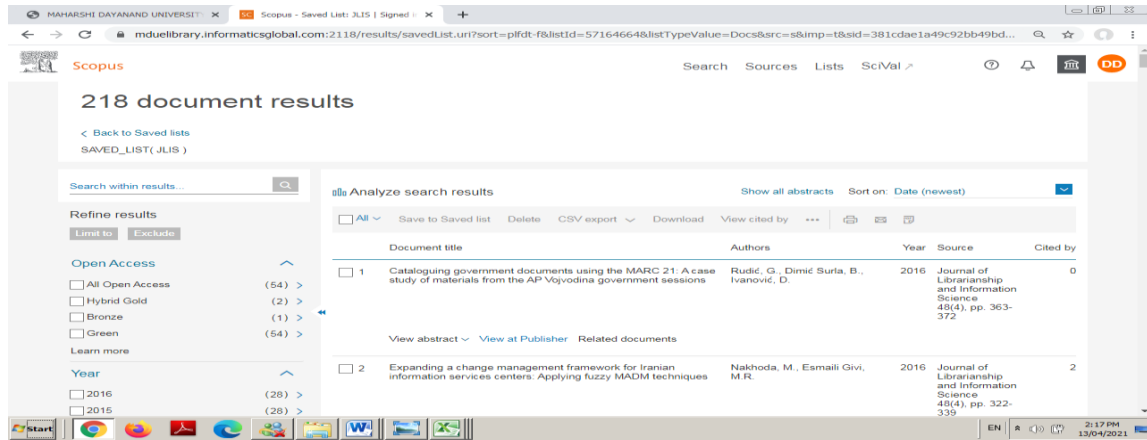


**Figure 4.1 Screenshot of JoLiS total research output webpage of SCOPUS)**

**Table 4.1: Data-selection**

SCOPUS data		Selected data for the study
Article	207	218
Review	15	
Editorial	7	
Letter	1	
<b>Total</b>	<b>230</b>	

A data set of 218 publications was exported in .csv and bibtex file including all citation information, bibliographical information with abstract & keywords information. All analysis was done on this data-set. The data was shifted to MS-Excel for analysis and presented in tabular form for further interpretations.



**Figure 4.2: Screenshot of JoLiS selected research output webpage of SCOPUS**

#### 4.1 Arithmetic Mean

It is an easiest and extensively used method to represent the entire data by value known as average. It is obtained by taking the sum of values of all items of a group, then dividing that sum total by the number of items. In this study, the mean value gives the average number of publications and citations per year.

$$\text{Arithmetic Mean} = \frac{\text{Total no.of Publications or citations}}{\text{Total no.of Years}}$$

#### 4.2 Annual Growth Rate

Annual growth rate is the change in the value of a measurement over the period of a year. It is a useful indicator to identify the trend. Annual growth rate is calculated using the following formula;

$$\text{Annual Growth Rate} = \frac{\text{Ending value} - \text{Beginning value}}{\text{Beginning value}}$$

#### 4.3 Ratio of Growth or Exponential Growth Rate (EGR)

To derive the yearly Ratio of Growth (RoG) which is calculated using the prior year as a support for expressing percentage shift from one year to the next year, the following formula is used.

$$\text{Ratio of Growth} = \frac{\text{No.of publications of present year}}{\text{No.of publications of prior year}}$$

#### 4.4 Relative Growth Rate (RGR)

To examine the growth rate of publications, researcher has used the relative growth rate and doubling time model developed by Mahapatra (1985).The relative growth rate is increased in the

number of publications or pages per unit of time. The Mean relative growth rate(R) over the specific period can be estimated as per the following equations:

$$R = \frac{\text{Log}_e W_2 - \text{Log}_e W_1}{T_2 - T_1}$$

Where,

R = Mean relative growth rate over the specific period

$\text{Log}_e W_1$  = Natural log of the initial number of articles

$\text{Log}_e W_2$  = Natural log of the final number of articles after a specific period

$T_2 - T_1$  = The unit difference between the initial time and the final time.

#### 4.5 Doubling Time (DT)

The doubling time is direct related to the relative growth rate. If the number of articles/pages of a subject doubles during a given period then the difference between the logarithm of numbers at the beginning and end of this period must be the logarithm of the number 2. After using the natural logarithm this difference has a value of 0.693. Thus the corresponding doubling time for each specific period for articles or pages can be measured by the following equation;

$$\text{Doubling Time}(Dt) = \frac{0.693}{R}$$

#### 4.6 Degree of Collaboration (DC)

To derive the degree of collaboration to determine the strength of the author's collaboration in any discipline the following formula or an indicator, suggested by K. Subramanyam (1983) has been used;

$$DC = \frac{N_m}{N_m + N_s}$$

Where,

DC= Degree of collaboration

$N_m$  = Number of multiple authors' articles

$N_s$  = Number of single author's articles

In this study, it is applied as;

$$\text{Degree of Collaboration} = \frac{\text{Number of multiple authors articles}}{\text{Number of multiple authors articles} + \text{Number of single authors articles}}$$

#### 4.7 Time Series Analysis (TSA)

A straight-line equation is adopted a statistical measure to forecast the trend pattern studied by Daya Sridhar (2010). The Trend analysis technique namely Time Series Analysis has been used by



the researcher. The purpose of using this technique is to predict the number of publications for the future i.e. 2025 to 2035. The year has been considered as the independent variable and number of publications and authors are considered as the dependent variable. Time series is a set of data based on the existing fact at regular interval. Time series analysis is used to predict the research productivity in future with the help of the observed data.

Straight Line Trend Equation:

$$Y_t = a + b_x(\text{or}) Y_t = a + b (X - X)$$

Where,

- $Y_t$  = Trend in year
- $a$  = Trend of the mid-year
- $b$  = Annual change in trend

In the study, researcher has collected data for ten years (2007-2016) and used simple linear regression method to the concept of literature output for future trend analysis.

## 5 DATA ANALYSIS

### 5.1 Data Details

The researcher has downloaded necessary bibliographic data from the SCOPUS database for the period 2007 to 2016. The analysis is based on the journal's publication as an indicator of scientometric analysis. The table describes brief details of the data.

**Table Error! No text of specified style in document.: Basic data information of JoLiS during 2007-2016**

S.No.	Details about data	Observed value
1.	Study-Period	2007-2016
2.	Time-Span	10 years
3.	Total No. of Publications	218
4.	References	8783
5.	Author Appearances	460
6.	Unique Authors	375
7.	Multi-authored documents	151
8.	Single-authored documents	67

## 5.2 Yearly distribution of JoLiS publications

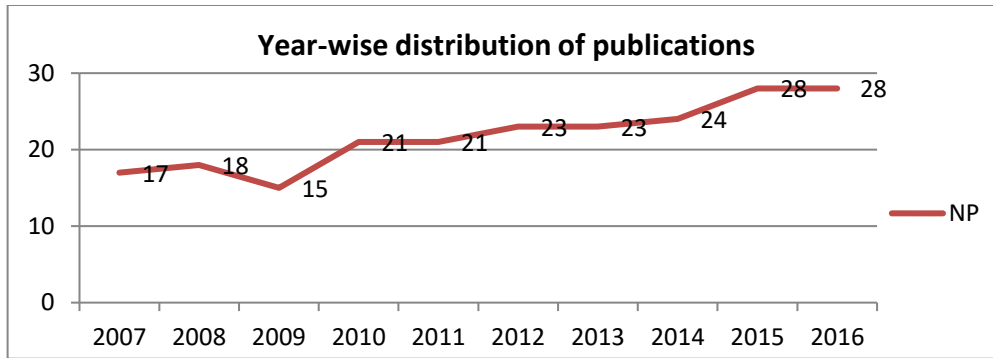
Table 5.2 explores the yearly distribution of articles of JoLiS from 2007 to 2016. A total of 218 articles were published during the study period. The table shows that JoLiS has led to a positive increase in the percentage of growth of publication during the study period excluding in the year 2009. The total output of publications for the study period remained between 7.80 per cent to 12.84 per cent.

**Table 5.2: Yearly distributions of JoLiS publications**

S.No.	Year	NP	%	Cumulative Total	Cumulative%
1	2007	17	7.80	17	7.80
2	2008	18	8.26	35	16.06
3	2009	15	6.88	50	22.94
4	2010	21	9.63	71	32.57
5	2011	21	9.63	92	42.20
6	2012	23	10.55	115	52.75
7	2013	23	10.55	138	63.30
8	2014	24	11.01	162	74.31
9	2015	28	12.84	190	87.16
10	2016	28	12.84	<b>218</b>	<b>100.00</b>
	<b>Total</b>	<b>218</b>	<b>100.00</b>		

**\*NP: No. of publications**

However, most productive years were 2015 and 2016 with 28 (12.84%) publications and the least productive year was 2009 with 15(6.88%) publications. The table shows that JoLiS publications have gradually increased (except 2009) and have given more contribution to the field.



**Figure Error! No text of specified style in document.: year-wise distribution**

### 5.3 Yearly volume and Issue wise distribution of JoLiS publications

Table 5.3 shows the yearly volume and issue wise distribution of articles of JoLiS from 2007 to 2016. Table explores that maximum number of articles are published in the issue number two (25.69%) and minimum number of articles are published in the issue number one (23.85%) during the study period.

**Table 5.1: Vol. & Issue wise yearly distribution of JoLiS publications**

Issue No	Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	%
	Vol.	39	40	41	42	43	44	45	46	47	48		
1		4	5	4	4	5	6	5	6	6	7	52	23.85
2		4	5	4	7	5	6	6	6	6	7	56	25.69
3		5	5	4	4	5	5	6	6	8	7	55	25.23
4		4	3	3	6	6	6	6	6	8	7	55	25.23
<b>Total</b>		<b>17</b>	<b>18</b>	<b>15</b>	<b>21</b>	<b>21</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>28</b>	<b>28</b>	<b>218</b>	<b>100</b>
<b>%</b>		<b>7.80</b>	<b>8.26</b>	<b>6.88</b>	<b>9.63</b>	<b>9.63</b>	<b>10.55</b>	<b>10.55</b>	<b>11.01</b>	<b>12.84</b>	<b>12.84</b>	<b>100.00</b>	

**\*Vol: Volume**

In the volume wise distribution, Volume 47 & 48 published highest number of publications (12.84%) each and volume 41 contributed least publications (6.88%).

#### 5.4 Arithmetic Mean

The arithmetic mean of all publications for the study period 2007-2016 has been calculated to be 21.8. It reveals that during the study period an average 21 publications were published per year.

**Table 5.4: Arithmetic Mean**

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	Avg.
NP	17	18	15	21	21	23	23	24	28	28	218	21.8

\*Avg : Average

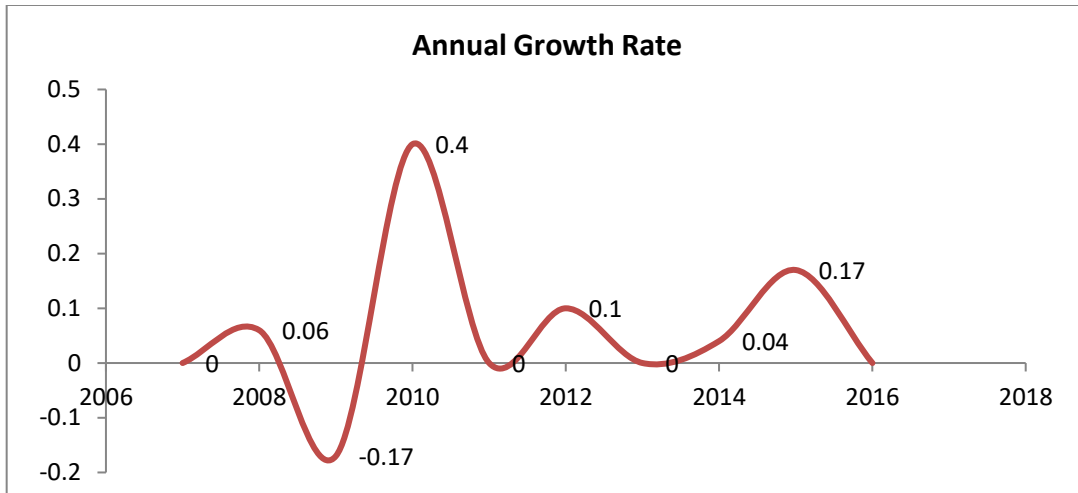
#### 5.5 Annual Growth Rate

Table 5.5 explores the annual growth rate of articles published during study period. The table shows that annual growth rate in the years 2011, 2013 and 2016 is found nil as these years have same publications of their respective previous years.

**Table 5.5: Annual Growth Rate**

S. No.	Year	NP	AGR
1	2007	17	-
2	2008	18	0.06
3	2009	15	-0.17
4	2010	21	0.40
5	2011	21	0.00
6	2012	23	0.10
7	2013	23	0.00
8	2014	24	0.04
9	2015	28	0.17
10	2016	28	0.00
	<b>Total</b>	<b>218</b>	

The annual growth rate during the study period varies from -0.17 to 0.40. The maximum annual growth is determined in the year 2010 (0.40) and least growth rate in the year 2009 (-0.17).



**Figure 5.2: Annual Growth Rate**

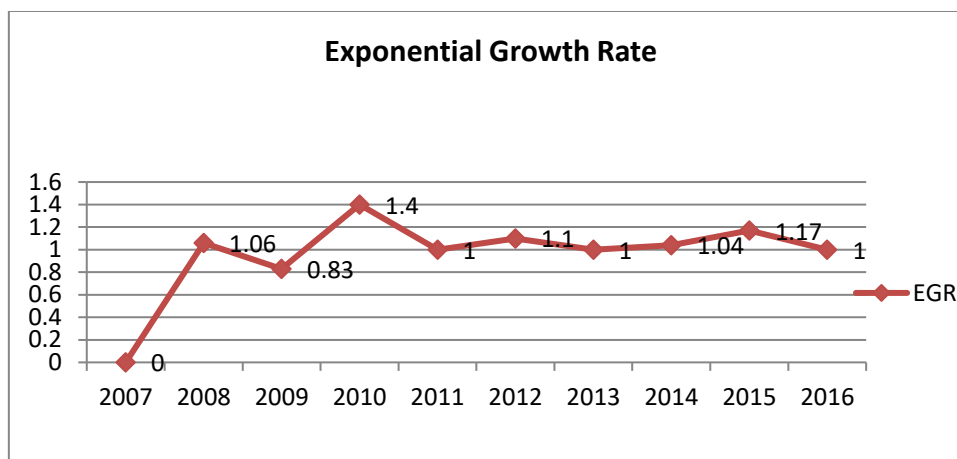
### 5.6 Exponential Growth Rates of JoLiS publications

The exponential growth rate of JoLiS during 2007-2016 has been calculated and shown in table 5.6 The table explores that the exponential growth rate remained between 0.83 to 1.40 during the study period.

**Table 5.2: Exponential Growth Rate of Publications**

S. No.	Year	NP	EGR ( $y_{t1}/y_{t0}$ )
1	2007	17	-
2	2008	18	1.06
3	2009	15	0.83
4	2010	21	1.40
5	2011	21	1.00
6	2012	23	1.10
7	2013	23	1.00
8	2014	24	1.04
9	2015	28	1.17
10	2016	28	1.00
	<b>Total</b>	<b>218</b>	

The growth rate was highest during the year 2010 (1.40) and least during the year 2009 (0.83).



**Figure 5.1: Exponential Growth Rates**

### 5.7 Relative Growth Rate and Doubling Time of JoLiS publications

Table 5.7 presents the relative growth rate and doubling time of JoLiS publications during 2007-2016. The table represents that relative growth rate of all publications gradually decreased over the years. The maximum relative growth rate is determined for the year 2008 with 0.73 growth frequency and minimum for the year 2016 with 0.13 frequencies.

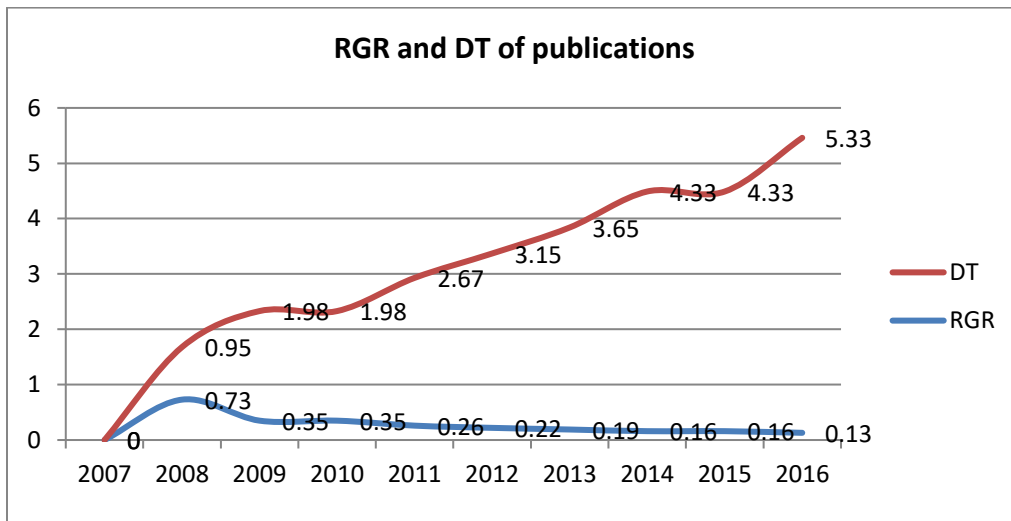
**Table 5.7: Relative growth rate and doubling time of the JoLiS**

Year	NP	Cum. Total	Log <sub>e</sub> w <sub>1</sub>	Log <sub>e</sub> w <sub>2</sub>	RGR (w <sub>2</sub> -w <sub>1</sub> )	Mean RGR(R)	DT= 0.693/R	Mean DT
2007	17	17	-	2.83	-	0.34	-	1.51
2008	18	35	2.83	3.56	0.73	0.17	0.95	4.15
2009	15	50	3.56	3.91	0.35		1.98	
2010	21	71	3.91	4.26	0.35		1.98	
2011	21	92	4.26	4.52	0.26		2.67	
2012	23	115	4.52	4.74	0.22		3.15	
2013	23	138	4.74	4.93	0.19	3.65		
2014	24	162	4.93	5.09	0.16	4.33		
2015	28	190	5.09	5.25	0.16	4.33		
2016	28	218	5.25	5.38	0.13	5.33		
<b>Total</b>	<b>218</b>					<b>0.25</b>		<b>2.83</b>

**Cum: Cumulative, DT: Doubling time**

The first half years shows that an average rate as 0.34 and second half years shows that an average growth rate as 0.17. The average growth rate of research publications works out to 0.25.

The doubling time is to determine the range from 0.95 to 5.33. It is to the found maximum in the year 2016 with 5.33 doubling time-frequency and minimum at 2008 with 0.95 doubling time-frequency. The first half shows that an average rate as 1.51 and second half years shows that an average growth rate as 4.15. The doubling time is gradually increased year by year during 2007-2016. Average doubling time works out to 2.83. It shows that relative growth rate and the doubling time are the inverted proportional of JoLiS publications.



**Figure 5.2: Relative Growth Rate & Doubling Time**

### 5.8 Time Series Analysis of JoLiS publications

The future growth of publications is analyzed and for it straight line equation is applied to arrive at estimates for future growth under the time series analysis. The use of this method predict the number of publications near future that is from 2025 to 2035.

$$\text{Straight Line equation } Y_t = a + bX \text{ or } Y_t = a + b(X - \bar{X})$$

$$\text{Mid- Year } \bar{X} = 2011/2012 = 2011.5$$

$$\text{The trend of the mid-year } a = \frac{\sum Y}{N} = \frac{218}{10} = 21.8$$

$$\text{Annual change in trend } b = \frac{\sum XY}{\sum X^2} = \frac{111}{82.5} = 1.35$$

**Table 5.8: Time series analysis of JoLiS publications**

Year (X)	NP (Y)	$x = X - \bar{X}$	$x^2$	$xY$
2007	17	-4.5	20.25	-76.5
2008	18	-3.5	12.25	-63
2009	15	-2.5	6.25	-37.5
2010	21	-1.5	2.25	-31.5
2011	21	-0.5	0.25	-10.5
2012	23	0.5	0.25	11.5
2013	23	1.5	2.25	34.5
2014	24	2.5	6.25	60
2015	28	3.5	12.25	98
2016	28	4.5	20.25	126
<b>Total</b>	<b>218</b>	<b>0</b>	<b>82.5</b>	<b>111</b>

Predicted literature in 2025 is when  $X = 2025 - 2011.5 = 13.5$

$$= 21.8 + 1.35 \times 13.5$$

$$= 21.8 + 18.23 = 40.03$$

Predicted literature in 2026 is when  $X = 2026 - 2011.5 = 14.5$

$$= 21.8 + 1.35 \times 14.5$$

$$= 21.8 + 19.58 = 41.38$$

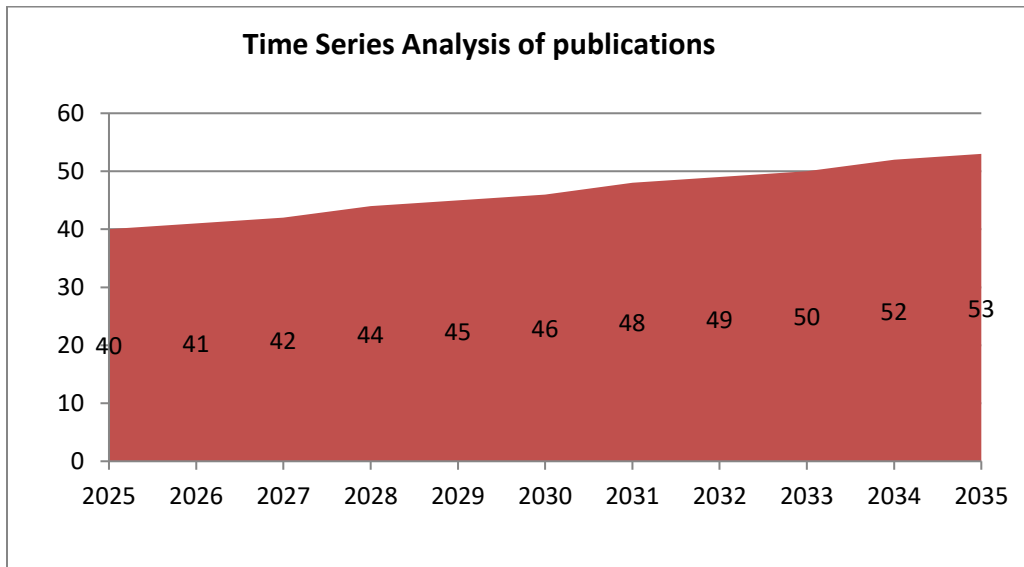
Similarly publication frequency is predicted for the year upto 2035.



**Table 5.3 Predicted publications of JoLiS**

S.N.	Predicted Year	Projected Publications
1	2025	40
2	2026	41
3	2027	42
4	2028	44
5	2029	45
6	2030	46
7	2031	48
8	2032	49
9	2033	50
10	2034	52
11	2035	53

The result shows that the estimated future growth of JoLiS publications increases from 28 in the year 2016 to 53 in the year 2035 which is clearly shown in table 5.9 and shows that rate of growth is positive in relation to the year wise publications.



**Figure 5.3: Predicted Publications**

### 5.9 Yearly distribution of authorship pattern in JoLiS research output

Table 5.10 shows the yearly authorship pattern of JoLiS. It is found that maximum 92 publications are contributed by joint authorship of 184 authors followed by single authors with 67

publications. Minimum 2 articles are contributed by 6 and 7 authors' articles .It is found that maximum 65 authors contributed in the year 2015 and minimum 26 authors are observed in the year 2009.A total 460 authors contributed 218 articles during the study period. Author's growth rate fluctuates during the study period.

**Table Error! No text of specified style in document.0: Year wise distribution of authorship pattern in JoLiS research output**

Authors/ Years		1	2	3	4	5	6	7	Total (%)
2007	TP	4	9	2	1	1	0	0	17 (7.80)
	TA	4	18	6	4	5	0	0	37 (8.04)
2008	TP	7	4	6	0	0	1	0	18 (8.26)
	TA	7	8	18	0	0	6	0	39 (8.48)
2009	TP	7	5	3	0	0	0	0	15 (6.88)
	TA	7	10	9	0	0	0	0	26 (5.65)
2010	TP	6	8	6	1	0	0	0	21 (9.63)
	TA	6	16	18	4	0	0	0	44 (9.57)
2011	TP	10	9	0	2	0	0	0	21 (9.63)
	TA	10	18	0	8	0	0	0	36 (7.83)
2012	TP	6	11	4	2	0	0	0	23 (10.55)
	TA	6	22	12	8	0	0	0	48 (10.43)
2013	TP	5	11	6	0	1	0	0	23 (10.55)
	TA	5	22	18	0	5	0	0	50 (10.87)
2014	TP	6	12	4	1	0	0	1	24 (11.01)
	TA	6	24	12	4	0	0	7	53 (11.52)
2015	TP	8	11	4	4	0	0	1	28 (12.84)
	TA	8	22	12	16	0	0	7	65 (14.13)
2016	TP	8	12	5	1	1	1	0	28 (12.84)
	TA	8	24	15	4	5	6	0	62 (13.48)
<b>Total</b>	<b>TP</b>	<b>67</b>	<b>92</b>	<b>40</b>	<b>12</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>218 (100%)</b>
	<b>TA</b>	<b>67</b>	<b>184</b>	<b>120</b>	<b>48</b>	<b>15</b>	<b>12</b>	<b>14</b>	<b>460 (100%)</b>

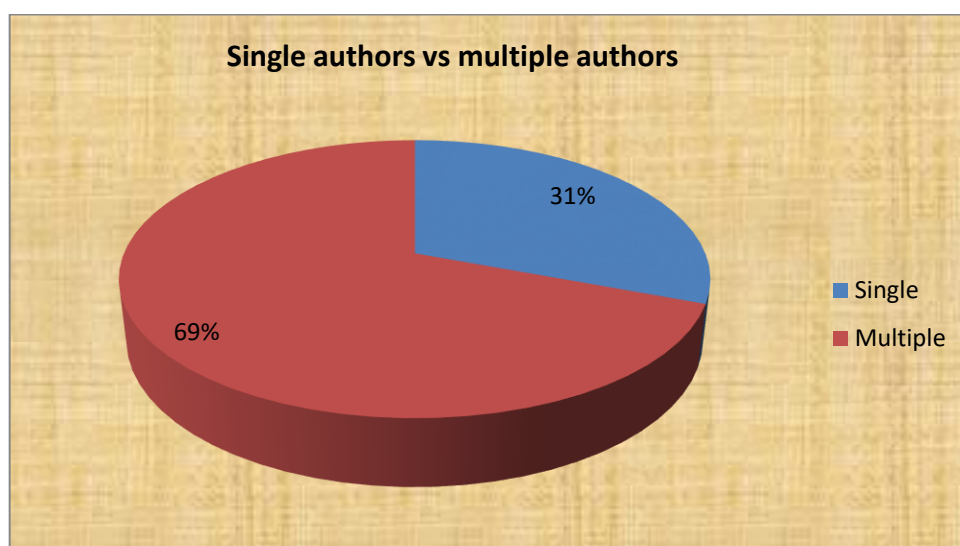
### 5.10 Single author's vs multiple authors

Table 5.11 shows the single author's vs. multiple authors' publications of JoLiS. Out of 218 publications; single authors produced 67 articles which is 30.73 percent contribution of total.

**Table Error! No text of specified style in document.1: Single author's vs multiple authors**

S. No.	Authorship Patterns	No. of publications	%
1	Single	67	30.73
2	Multiple	151	69.27
<b>Total</b>		<b>218</b>	<b>100%</b>

A total of 151 articles are produced by multiple authors which is the 69.27 percent contribution of total. It shows that collaborated articles are dominant than the single author's contributions.



**Figure 5.6: Single author vs multiple authors**

### 5.11 Degree of Collaboration (DC)

Table 5.12 depicts the year-wise degree of collaboration among authors of JoLiS. The degree of collaboration varies from 0.52 to 0.78 during the study. The table explores the dominance of multiple authors' publications. The average degree of collaboration has determined as 0.69 which shows that authors of JoLiS has more interested in joint contribution rather than single contribution.

**Table Error! No text of specified style in document.2: Degree of Collaboration (DC)**

<b>Year</b>	<b>Single</b>	<b>Multiple</b>	<b>N<sub>m</sub>+N<sub>s</sub></b>	<b>DC</b>
2007	4	13	17	0.76
2008	7	11	18	0.61
2009	7	8	15	0.53
2010	6	15	21	0.71
2011	10	11	21	0.52
2012	6	17	23	0.74
2013	5	18	23	0.78
2014	6	18	24	0.75
2015	8	20	28	0.71
2016	8	20	28	0.71
<b>Total</b>	<b>67</b>	<b>151</b>	<b>218</b>	<b>Mean DC 0.69</b>

### 5.12 Most productive countries in JoLiS publications

Table 5.13 shows the productivity of the top ten countries based on corresponding address in JoLiS during the study period 2007-2016.

**Table Error! No text of specified style in document.3: Top ten countries in JoLiS publications**

<b>S.No.</b>	<b>Country</b>	<b>TP</b>	<b>% of TP (218)</b>
1	United Kingdom	72	33.03
2	USA	16	7.34
3	Korea	12	5.50
4	China	8	3.67
5	Israel	8	3.67
6	Australia	7	3.21
7	Canada	7	3.21
8	Spain	7	3.21
9	Sweden	6	2.75
10	Hong Kong	5	2.29

This table shows that the United Kingdom contributed more than one-third share of total publications 72 (33.03%), followed by the USA 16 (7.34%), South Korea 12 (5.50%), China & Israel contributed an equal share 8 (3.67%) and rest of the countries are presented in the table.

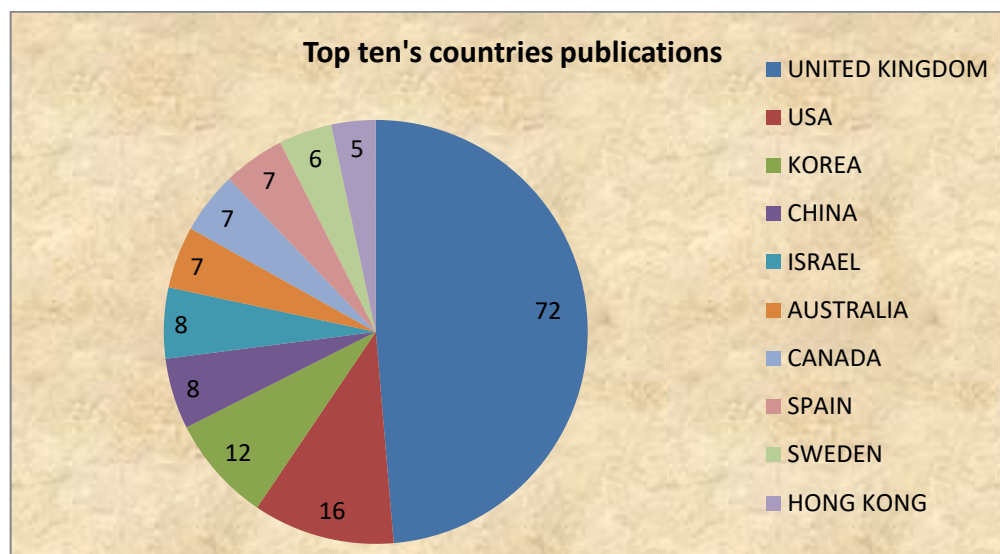


Figure 5.7: Top ten countries

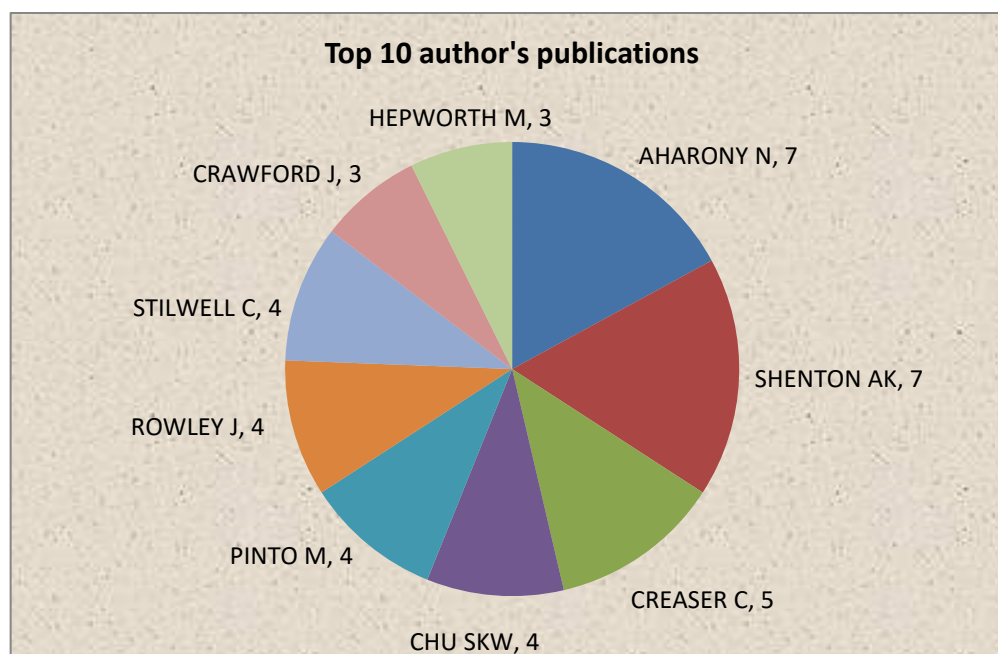
### 5.13 Most prolific authors based on contribution

Table 5.14 shows the most prolific authors in term of their contribution to JoLiS. A total

Table 5.14: Top ten most prolific authors of JoLiS

Rank	Authors	NP	% of Total (218)	Cumulative Total	% of Cumulative Total
1	Aharony N	7	3.21	7	3.21
2	Shenton AK	7	3.21	14	6.42
3	Creaser C	5	2.29	19	8.72
4	Chu SKW	4	1.83	23	10.55
5	Pinto M	4	1.83	27	12.39
6	Rowley J	4	1.83	31	14.22
7	Stilwell C	4	1.83	35	16.06
8	Crawford J	3	1.38	38	17.43
9	Hepworth M	3	1.38	41	18.81
10	Irving C	3	1.38	44	20.18

of 375 unique authors have contributed to JoLiS. Among these authors, top ten authors are ranked according to their publications in JoLiS. It is found that Aharony N and Shenton AK have contributed maximum articles 7 (3.21%) each followed by Creaser C with 5 (1.83%) publications. Rest of the prolific authors up to 10 rank are presented in the table.



**Figure 5.8: Top Ten Authors**

#### 5.14 Most cited papers

Table 5.15 shows ten highly cited papers of JoLiS. The paper titled “Academic libraries and social and learning space: A case study of Loughborough university library, UK” authored by Bryant J., Matthews G. and Walton G., published in the year 2009 is on top by receiving the highest number of citations (101) followed by an article authored by Chu S.K.-W. and Du H.S with 100 citations and the paper at 10<sup>th</sup> position entitled “Analysis of the interdisciplinary nature of library and information science” written by Prebor G. received 40 citations during the study period i.e. 2007-2016.

**Table Error! No text of specified style in document.5: Most cited papers**

S.No.	Author	Title	Year	Citations
1	Bryant J., Matthews G., Walton G.	Academic libraries and social and learning space: A case study of Loughborough university library, UK	2009	101
2	Chu S.K.-W., Du H.S.	Social networking tools for academic libraries	2013	100
3	Cox A.M., Pinfield S.	Research data management and libraries: Current activities and future priorities	2014	94
4	Walsh A.	Information literacy assessment: Where do we start?	2009	86
5	Lloyd A., Williamson K.	Towards an understanding of information literacy in context: Implications for research	2008	74
6	Bewick L., Corrall S.	Developing librarians as teachers: A study of their pedagogical knowledge	2010	57
7	Pinto M., Cordón J.A., Díaz R.G.	Thirty years of information literacy (1977-2007): A terminological, conceptual and statistical analysis	2010	51
8	Aharony N.	Library and Information Science research areas: A content analysis of articles from the top 10 journals 2007-2008	2012	48
9	Crawford J., Irving C.	Information literacy in the workplace: A qualitative exploratory study	2009	43
10	Prebor G.	Analysis of the interdisciplinary nature of library and information science	2010	40

## CONCLUSION

The present study highlights the growth pattern and estimates the future growth trend of JoLiS publications. The authorship pattern demonstrates that the joint contribution is in trend among JoLiS authors during study period. The future trend of JoLiS publication predicts the near future growth of JoLiS publications and found that rate of growth is positive in relation to the year wise publications. The present study revealed that developed countries are dominating in terms of contribution in this journal. The study explores the quantitative analysis of JoLiS publications using various scientometric parameters which indicate the trends of this publication quantitatively.

## REFERENCES

- Abdi, A., Idris, N., Alguliyev, R.M., & Aliguliyev, R.M. (2018). Bibliometric analysis of IP and M journal (1980–2015). *Journal of Scientometric Research*, 7(1), 54–62. doi:10.5530/jscires.7.1.8.
- About journal. (2021). Retrieved from <https://journals.sagepub.com/home/lis>.
- Grinäv, A.V. (2020). The Disadvantages of Using Scientometric Indicators in the Digital Age. *IOP Conference Series: Materials Science and Engineering*, 940, 012149. <https://doi.org/10.1088/1757-899x/940/1/012149>.
- Hajam, M.A. (2017). Scientometric analysis of journal of social work from 2001 to 2010. *IP Indian Journal of Library Science and Information Technology*. 3(2). Retrieved from <https://www.researchgate.net/publication/319314371>.
- Jawwad, M., Soroya, M.S., & Ahmad, P. (2021). Mapping the research output of Journal of Social Sciences And Humanities (JSSH): A bibliometric study. *Library Philosophy and Practice* (e-journal), 5087. Retrieved from <https://digitalcommons.unl.edu/libphilprac/5087>.
- Kumari, D., Swain, N. and Parmar, S. (2019). Research productivity of Journal of Documentation during 2007- 2016. In Tengku Adil Tengku Izhar and Mohd Shamsul Mohd Shoid (ed.); *Asia-Pacific Library & Information Education and Practice (A-LIEP 2019)*, Puncak Perdana Campus: Selangor, Malaysia.
- Mahapatra, M. (1985). On the validity of the theory of exponential growth of scientific literature. *Proceedings of the 15th IASLIC Conference: Bangalore*.
- Nalimov, V. V., & Naukometriya, M. Z. (1969). *Izuchenie razvitiya nauki kak informatsionnogo protsessa* [Scientometrics. A Study of Science Development as an Information Process].
- Subramanyam, K. (1983). Bibliometric studies of Research collaboration: A review. *Journal of Information Science*, 6(1), 33–38. doi:10.1177/016555158300600105.
- Tague-Sutcliffe, J. (1992). An introduction to Informetrics. *Information Processing and Management*, 28(1), 1–3. doi:10.1016/0306-4573(92)90087-G.



