



## Evaluating author productivity and journal professionalism using Lotka's Law

Cecep Ibrahim<sup>1\*</sup>; Eka Suaib<sup>2</sup>; Asrul Jaya<sup>3</sup>; Moh. Ricky Ramadhan R.<sup>4</sup>; Hera Pebrianti<sup>5</sup>; Muthmainnah Aufaa Hamzah<sup>6</sup>

<sup>1,3,4,5</sup>Library and Information Science, Halu Oleo University, Indonesia

<sup>2</sup>Political Science, Halu Oleo University, Indonesia

\* Correspondence: cecep.ibrahim@uho.ac.id

Submitted: 09-07-2025; Reviewed: 02-01-2026; Accepted: 19-02-2026; Revised: 10-02-2026

### ABSTRACT

Lotka's law is a bibliometric approach that examines the authorship distribution. The study in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan evaluated authors' productivity and professionalism in three ways using Lotka's law: straight count, complete count, and proportionate count. This study involved data collection, cleaning, and extraction, as well as data analysis. Data are collected directly from the Jurnal Ilmu Informasi Perpustakaan dan Kearsipan. Data cleaning and extraction are necessary to ensure data veracity. The third stage involves data analysis using straight, complete, and proportionate count processes along with Lotka's law. The results show that the calculation using the straight count follows Lotka's law, whereas the complete count does not. This journal is unprofessional. The use of straight count and complete count will agree with Lotka's proposition if journal management is done properly. Suggestions for further research: Lotka's law technique can be used to assess a journal's professionalism in terms of article publication and dissemination.

### ABSTRAK

Hukum Lotka adalah pendekatan bibliometrik yang meneliti distribusi kepengarangan. Penelitian ini pada Jurnal Ilmu Informasi Perpustakaan dan Kearsipan mengevaluasi produktivitas dan profesionalisme penulis dalam tiga cara menggunakan hukum Lotka: penghitungan langsung, penghitungan lengkap, dan penghitungan proporsional. Studi ini melibatkan pengumpulan, pembersihan, dan ekstraksi data, serta analisis data. Data dikumpulkan langsung dari Jurnal Ilmu Informasi Perpustakaan dan Kearsipan. Pembersihan dan ekstraksi data diperlukan untuk memastikan kebenaran data. Tahap ketiga melibatkan analisis data menggunakan proses penghitungan langsung, lengkap, dan proporsional bersama dengan hukum Lotka. Hasil penelitian menunjukkan bahwa perhitungan menggunakan penghitungan langsung sesuai hukum Lotka, sedangkan penghitungan lengkap tidak sesuai hukum Lotka. Jurnal ini tidak profesional. Penggunaan penghitungan langsung dan penghitungan lengkap akan sesuai dengan proposisi Lotka jika manajemen jurnal dilakukan dengan benar. Saran untuk penelitian lebih lanjut: metode hukum Lotka dapat digunakan untuk mengukur profesionalisme jurnal dalam hal publikasi dan penyebaran artikel.

**Keywords:** Bibliometrics; Lotka's law; Professionalism journal

## 1. INTRODUCTION

Numerous emerging bibliometric methodologies can be applied in research. The bibliometric method can be applied to a wide range of subjects (Al-Raei, 2023; Chen et al., 2023; Cheng et al., 2023; Chirinos et al., 2023; Dželalija & Roić, 2023; X. Li et al., 2023; Liu et al., 2023; López-Muñoz et al., 2023; Lu et al., 2023; K. Sharma et al., 2023; Shiah et al., 2023; Wang et al., 2023; Zhang et al., 2023). The bibliometric method is used to analyze large amounts of cumulative research using secondary data in the form of bibliographic data (Adnan et al., 2022; Caballero et al., 2023; Hasenay & Ačkar, 2022; Lee et al., 2023; Li, 2022; Nuryana et al., 2023; Vivarelli, 2023; Yanhui et al., 2022). In bibliometric research, bibliographical information can be analyzed in many different ways, especially when it comes to authorship analysis. In cumulative research, the productivity of the author can be ascertained using the bibliometric method of authorship analysis. Aside from

understanding the author's work, the authorship pattern among authors, which is related to author collaboration can also be recognized (Alshaikh, 2023; Asatani et al., 2023; Barbu, 2023; J. Li et al., 2023; Mehta et al., 2023; Mitrović et al., 2023; Mohammed et al., 2023; Singh, 2023; Zakaria et al., 2023; Zharova et al., 2023).

However, most analyses of bibliographic data, particularly those pertaining to author columns, simply take into account the total number of entries. Author analysis based on author weight is still not implemented (Bolaños et al., 2022; Desai et al., 2018; Kalcioğlu et al., 2018; Qua et al., 2021). Determining the author's weight is crucial in determining the author's productivity in a cumulative study, whether it is representative or not (Donner, 2020; Lee, 2022; Shi et al., 2019; Wang et al., 2019). Straight count, complete count, proportional count, adjusted count, harmonic count, geometric count, and golden count are ways for determining the composition of the author's weight when analyzing the author's contribution in an article (Todeschini and Baccini, 2016). Each method for calculating the author's weight has its own set of standards or rules. The first author is the only one whose weight is recognized by the straight count technique; the other authors are excluded. The complete count technique calculates the weight of each author who contributed to the literature. The proportionate count approach calculates the author's weight based on the authors' contributions 1, 2, 3, and so on, resulting in different amounts for each author. The adjusted count, also known as fractional count, is the author's weight composition determined by dividing the average contribution value across authors 1, 2, 3, and so on.

The author's weight composition measurement method can be applied to journals or various scientific fields to analyze cumulative study results and draw conclusions. Lotka's law analysis, as well as the author's weight are used in this study to establish the weight of authorship. Lotka's law is a bibliometric technique focusing on the distribution of authorship. (Kushairi & Ahmi, 2021; Sahu & Jena, 2022; Tunga, 2021). Lotka's law can be used to both straight and complete count procedures. In Indonesia, numerous journals are published by various entities. The Ministry of Education and Culture oversees Sinta (Science and Technology Index), which rates Indonesian publications. The reasons for Jurnal Ilmu Informasi Perpustakaan dan Kearsipan Sinta-Indexed 4 are as follows: this journal is in the process of developing into a high-quality and recognized reference publication. This measurement approach can also be used to evaluate the performance of Indonesian journals. There are significant gaps between this research and earlier research. Several previous studies on employing straight count and complete count methodologies to analyze journal performance were completed. (Naheem et al., 2019; Naqvi & Fatima, 2017). The previous study used straight count, complete count, and proportional count procedures but did not apply Lotka's law method (Egghe et al., 2000). This study will evaluate author productivity and professionalism in a journal using the straight count, complete count, and proportional count approaches, as well as Lotka's law, in the indexed Jurnal Ilmu Informasi Perpustakaan dan Kearsipan, Sinta 4.

## 2. LITERATURE REVIEW

### 2.1 Bibliometric

Bibliometrics is a quantitative examination of descriptive statistics (Carlos et al., 2024; Thompson & Walker, 2015) that examines bibliographic data contained in publications (e.g., journal articles, books, policy papers, patents, news, etc.). The bibliometric method, including association tests for citation and social media variables, can be used for quantitative analysis of inferential statistics (Fox et al., 2024; Ivanović et al., 2025; Mullins et al., 2020; S. Sharma et al., 2023; Valizadeh-Haghi et al., 2022). Bibliometric research can assess state productivity, institutional, and even individual productivity. According to Lotka's law, bibliometric methods can also be used to measure the distribution of authors, identify the most productive journals and even the most productive and influential authors, and determine the topics that are trending in a particular field (Aytac et al., 2025; Sahu & Jena, 2022; Singh & Jaiswal, 2025).

## 2.2 Lotka's law

Bibliometrics (1922) is the source of Lotka's law, which was initially presented by Alfred J. Lotka in the early 1900s (1926). For certain themes, nations, institutions, and journals, the frequency distribution of authors is determined using Lotka's law (Amanullah et al., 2025; Aytac et al., 2025; Bisaria, 2020; Da Silva et al., 2019; Fadhli et al., 2023; Singh & Jaiswal, 2025). Lotka's law method is centered on author measurement. Calculations pertaining to the authorship weight assessment's composition are directly tied to authorship (Todeschini & Baccini, 2016). Todeschini and Baccini (2016) state that the authorship weight is made up of the following: proportional count, adjusted count, proportional count, geometric count, harmonic count, golden count, straight count (first author/senior author), and full count (normal count/standard count/total author count). The distribution of author frequencies applied to Lotka's law technique, however, can be determined using the authorship weight, which is both a straight and complete count.

## 2.3 Journal

A journal is a database or storage space for a collection of articles published in each volume and year. Every scientific discipline has journals, each with a distinct scope based on its unique features. According to the citations gathered from the article's publication, journals have their own ratings on their respective index rankings, such as Sinta (Ahmadi, 2019; Suprpto et al., 2021), Scimago journal ranking (SJR) (Melero-Fuentes et al., 2025), and journal citation report (JCR) (Kim & Atteraya, 2024). Furthermore, the journal object can address citation points. Given the volume of authors who submit to journal papers, the question of authorship in journals can be comprehensively explored, particularly when using Lotka's law method.

## 3. METHOD

This study uses a quantitative method with a bibliometric approach, specifically Lotka's law. The purpose of this study is to measure authors' productivity and professionalism in journals using Lotka's law in three ways: straight count, complete count, and proportionate count in *Jurnal Ilmu Informasi Perpustakaan dan Kearsipan*. This study includes three stages: data collecting, data cleaning and extraction, and data analysis.

### 3.1 Data collection

Data for this study were acquired from *Jurnal Ilmu Informasi Perpustakaan dan Kearsipan* (E-ISSN: 2302-3511), Padang State University, and were indexed by Sinta, specifically Sinta 4, between 2013 and 2022. During the data collection phase, researchers used the Publish or Perish (PoP) program to retrieve the necessary data by inputting the journal's E-ISSN. The acquired data is exported to Microsoft Excel as a CSV file.

### 3.2 Data cleaning and extraction

The exported data is next processed for data purification, which entails directly matching Excel data to the journal website. If two titles have the same title, only one is chosen, and if the journal website discovers a missing title, it is removed. After filtering, 426 items were obtained after manual entry. 8 articles were removed because they were not on the website, whereas 14 were added because they were not recorded when the data were first collected.

The researcher then creates an ID for each author based on their position, to make the data accessible when loaded into Rstudio and biblioshiny software. This is done after comparing the Excel data to the journal website. Using text to column/conditional formatting and countif to identify duplicate names, the researcher established the author's ID and separated the first, second, third, and so on authors.

### 3.3 Data analysis

To estimate the worth of the author's contribution using the straight count, complete count, and proportional count approaches, the data obtained in the CSV file is analyzed with Rstudio and Biblioshiny software. When employing the straight count technique to determine the value of each author's contribution, only the first/primary author is counted, while subsequent authors are ignored. When employing the complete count technique to evaluate the value of their contributions, all authors are assigned a value of one. It differs from the proportional count technique in that the author's position is considered when determining the value of their contribution, resulting in a single number when all contributions are added together. The following formula is used:

The straight count formula:

$$W(1) = 1 \quad w(k) = 0 \quad k = 2, \dots, A \quad \dots(i) \quad (\text{Todeschini \& Baccini, 2016})$$

where A is the total number of authors on the manuscript, and k is the author position. The senior scientist in the byline receives credit one, despite the fact that the senior author count is equal to the first author count. assigns the first author a weight of one, and all other authors a weight of zero.

The complete count formula:

$$w(k) = 1 \quad k = 1, \dots, A \quad \dots(ii) \quad (\text{Todeschini \& Baccini, 2016})$$

where A is the total number of authors on the manuscript, and k is the author position. Each author's position receives one point.

The proportional count formula:

$$P(k) = \frac{2}{n} \left(1 - \frac{k}{n+1}\right) \quad \dots(iii) \quad (\text{Todeschini \& Baccini, 2016})$$

where n is the total number of authors in the paper and k is the author position.

After determining the participation values for all the techniques to be used, the next step is to analyze the pattern of author productivity in the Padang State University Jurnal Ilmu Informasi Perpustakaan dan Kearsipan indexed Sinta 4 using the Lotka's law test and the Kolmonogrov-Smirnov test (K-S Test). The following formula is used:

- a. Parameters n and C

To determine the value of parameters n and C, the following formula is used:

$$b = \frac{n(\sum XY) - (\sum X \cdot \sum Y)}{n(\sum X^2) - (\sum X)^2}$$

$$b = -n$$

n = number of pairs of data

x = logarithm of x, i. e. number of articles

y = logarithm of y, i. e. number of authors

$$C = \frac{1}{\sum \frac{1}{x^n}}$$

- b. The Kolmonogrov-Smirnov test (K-S test) uses a critical value of  $\alpha=0.05$ . can be found using the equation  $1.36/\sqrt{N}$ .

The Lotka Theorem test and the K-S test are not used in the proportional count technique to ascertain the author's productivity pattern because of the limitations of the researchers. In this case,

it is difficult to perform calculations based on the Lotka Theorem test and the K-S test because the proportional count computation utilizes a decimal value. Thus, the author who employs this tactic the most successfully can be determined by looking at the highest proportion.

After finding the most prolific author in each strategy used, the researcher examines his/her research competence using the Scientometric method to evaluate the relationship between the research themes. The steps involved searching for papers published in the journal using PoP in the RIS format and extracting them from Mendeley. The next step is to manually validate the journal, eliminate duplicate articles, and use Mendeley to add articles if there are none. Then, using Mendeley, manually enter keywords based on the keywords from each article. After the metadata is completed, it is exported in the RIS format, which includes all the metadata. To assess skills, the final stage is visualization with Vosviewer and interpretation of the appearance and co-occurrence of keywords.

## 4. RESULT AND DISCUSSION

The three methods of Lotkas's law, straight count, complete count, and proportionate count were used in this study to evaluate the productivity and professionalism of authors in the journal published by the Sinta 4-indexed Jurnal Ilmu Informasi Perpustakaan dan Kearsipan.

### 4.1 Straight Counting

The first strategy is the straight-count method, in which all other authors receive zero points and only the first author of a published piece receives one point.

**Table 1.** The calculations for Lotka's law parameters

| No       | Number of articles (x) | Number of authors (y) | X=log x     | Y=log y     | XY          | X <sup>2</sup> |
|----------|------------------------|-----------------------|-------------|-------------|-------------|----------------|
| 1        | 1                      | 397                   | 0           | 2.598790507 | 0           | 0              |
| 2        | 2                      | 13                    | 0.301029996 | 1.113943352 | 0.335330363 | 0.090619058    |
| 3        | 3                      | 1                     | 0.477121255 | 0           | 0           | 0.227644692    |
| $\Sigma$ | n=3                    | 411                   | 0.77815125  | 3.712733859 | 0.335330363 | 0.31826375     |

(Source: Author's processed data, 2024)

Table 1 displays the author distribution in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan's publications. According to the straight-count approach for obtaining Lotka's law parameters, 397 authors create one article, 13 authors create two articles, and one author creates three. According to Table 1, more people only wrote one article.

**Table 2.** The Calculation of the value of parameter C

| No       | Number of articles (x) | Number of authors (y) | X <sup>n</sup> | $\frac{1}{X^n}$ |
|----------|------------------------|-----------------------|----------------|-----------------|
| 1        | 1                      | 397                   | 1              | 1               |
| 2        | 2                      | 13                    | 41.97438197    | 0.023824055     |
| 3        | 3                      | 1                     | 373.5676592    | 0.002676891     |
| $\Sigma$ | n=3                    | 411                   |                | 1.026500947     |

(Source: Author's processed data, 2024)

Furthermore, to obtain the value of parameter C, the authors perform calculations by using the formula  $C = \sum \frac{1}{x^n}$ . The value of n is obtained based on the formula

$$b = \frac{n(\Sigma XY) - (\Sigma X)(\Sigma Y)}{n(\Sigma X^2) - (\Sigma X)^2}, \text{ where } b = -n, \text{ so the value of } n = 5.3914. \text{ The researcher then determines the}$$

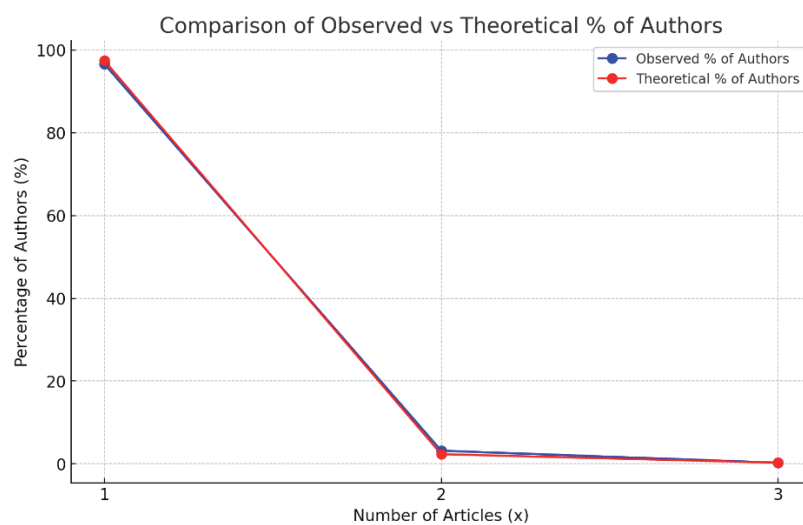
value of parameter  $C$  based on the formula above and the value contained in Table 2, the value of  $C = 0.974183222$ .

**Table 3.** The percentage of number of authors based on observations and theoretical calculations of Lotka's law

with pattern  $Yx, X^{5.3914} = 0.974183222$

| No       | Number of Articles (x) | Number of Authors (y) | % of observed authors (y') | $X^n$       | C           | % estimation of Lotka's theoretical value<br>$Y = \frac{C}{X^n}$ |
|----------|------------------------|-----------------------|----------------------------|-------------|-------------|------------------------------------------------------------------|
| 1        | 1                      | 397                   | 96.59367397                | 1           | 0.974183222 | 97.41832                                                         |
| 2        | 2                      | 13                    | 3.163017032                | 41.97438197 | 0.974183222 | 2.3209                                                           |
| 3        | 3                      | 1                     | 0.243309002                | 373.5676592 | 0.974183222 | 0.260778                                                         |
| $\Sigma$ |                        | 411                   |                            |             |             |                                                                  |

(Source: Author's processed data, 2024)



**Figure 1.** The percentage of number of authors based on observations and theoretical calculations of Lotka's law based on straight count

(Source: Author's processed data, 2024)

After calculating the value of  $C$ , the researcher calculated the theoretical value of Lotka's theorem using the following formula:  $Y = \frac{C}{X^n}$ . Table 3 indicates the percentage of authors based on the theoretical Lotka value estimate: 97.41% of the authors wrote one article out of 397 authors. Based on observations, 96.59% of the authors wrote a single article with up to 397 authors. Based on the data in Table 3, no significant difference was found between the percentage of authors based on observations and the percentage of authors based on the estimation of the theoretical Lotka value, with a difference of 0.82% or <1%.  $Y = \frac{C}{X^n}$

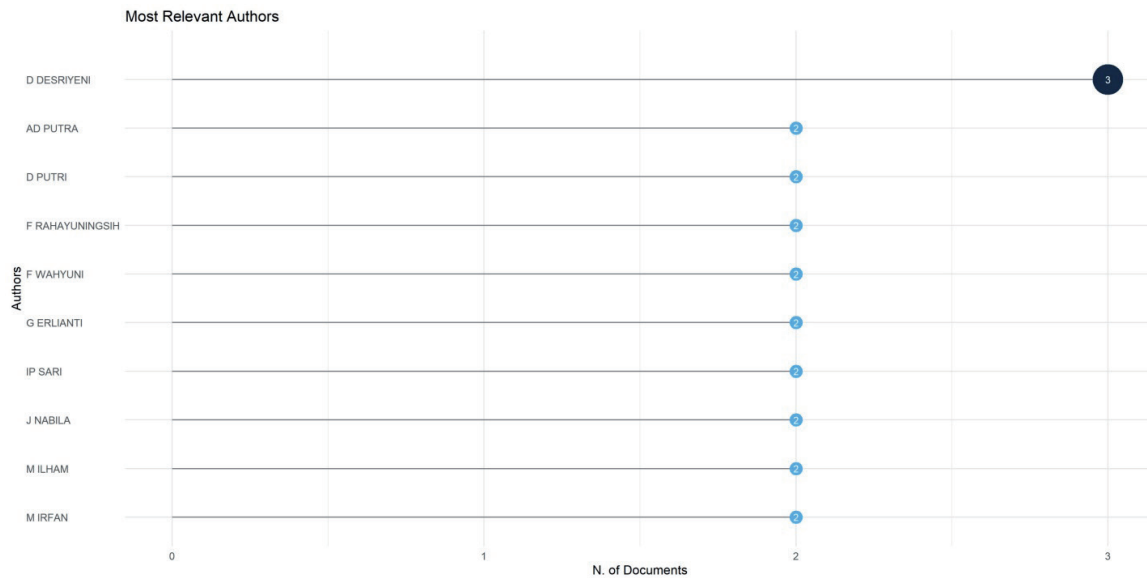
**Table 4.** The Kolmogorov-Smirnov test

| No       | Number of Articles (x) | Number of Authors (y) | % Number of Authors [Y'] | Cumulative Sum Y' [Sn(X)] | Lotka's law Theoretical Frequency [Yx] | Cumulative Sum of Theoretical Frequency [F0(X)] | Dmax  Fo(x)-Sn(x) |
|----------|------------------------|-----------------------|--------------------------|---------------------------|----------------------------------------|-------------------------------------------------|-------------------|
| 1        | 1                      | 397                   | 0.96593674               | 0.96593674                | 0.974183                               | 0.974183222                                     | 0.008246483       |
| 2        | 2                      | 13                    | 0.03163017               | 0.99756691                | 0.023209                               | 0.997392217                                     | -0.000174693      |
| 3        | 3                      | 1                     | 0.00243309               | 1                         | 0.002608                               | 1                                               | 0                 |
| $\Sigma$ |                        | 411                   |                          |                           |                                        |                                                 |                   |

(Source: Author's processed data, 2024)



The next stage is to determine the research hypothesis. The researcher performs a Kolmogorov-Smirnov test to determine the crucial value. The critical value is calculated using the formula  $1.36/\sqrt{N}$ . therefore, the critical value found = 0.0671 with  $\alpha = 5\%$ . Table 4 displays the Dmax values. The largest Dmax value was obtained by applying an absolute value, Dmax = 0.008246483. The Dmax value is less than the critical value, indicating acceptance of the null hypothesis or the Lotka proposition. This suggests that there is no significant difference in the percentage distribution of authors based on observations against the percentage distribution of authors based on Lotka theoretical value estimation.



**Figure 2.** The most productive authors based on straight counting

(Source: Author's processed data with R biblioshiny, 2024)

Figure 2 reveals that the most productive author in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan using the straight count approach is D. Desriyeni, who published three scientific publications in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan.

#### 4.2 Complete Counting

The second technique to author productivity distribution use the complete count method. The complete count is a method of determining the weight of authors who write a single article by allocating one point to each author. Authors 1, 2, 3, and so on all receive the same point, which is 1.

**Table 5.** The calculations for calculating Lotka's law parameters

| No | Number of articles (x) | Number of authors (y) | X=log x     | Y=log y     | XY          | X <sup>2</sup> |
|----|------------------------|-----------------------|-------------|-------------|-------------|----------------|
| 1  | 1                      | 425                   | 0           | 2.62838893  | 0           | 0              |
| 2  | 2                      | 15                    | 0.301029996 | 1.176091259 | 0.354038747 | 0.090619058    |
| 3  | 3                      | 1                     | 0.477121255 | 0           | 0           | 0.227644692    |
| 4  | 5                      | 1                     | 0.698970004 | 0           | 0           | 0.488559067    |
| 5  | 10                     | 1                     | 1           | 0           | 0           | 1              |
| 6  | 21                     | 1                     | 1.322219295 | 0           | 0           | 1.748263863    |
| 7  | 52                     | 1                     | 1.716003344 | 0           | 0           | 2.944667475    |
| 8  | 60                     | 1                     | 1.77815125  | 0           | 0           | 3.161821869    |
| 9  | 69                     | 1                     | 1.838849091 | 0           | 0           | 3.381365979    |
| 10 | 86                     | 1                     | 1.934498451 | 0           | 0           | 3.742284258    |
| 11 | 88                     | 1                     | 1.944482672 | 0           | 0           | 3.781012862    |
| Σ  | n=11                   |                       | 13.01132536 | 3.804480189 | 0.354038747 | 20.56623912    |

(Source: Author's processed data, 2024)

Table 5 shows the distribution of authors in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan who publish. Lotka's law parameters determined using the complete count approach indicate that 425 authors produce one article, 15 authors produce two articles, and one author produces three to 88 articles. Table 1 reveals that more people wrote a single article.

**Table 6.** The calculation of the value of parameter C

| No       | Number of articles (X) | $X^n$       | $\frac{1}{X^n}$ |
|----------|------------------------|-------------|-----------------|
| 1        | 1                      | 1           | 1               |
| 2        | 2                      | 1.742366401 | 0.573932096     |
| 3        | 3                      | 2.410999085 | 0.414765815     |
| 4        | 5                      | 3.630016101 | 0.275480872     |
| 5        | 10                     | 6.32481809  | 0.158107314     |
| 6        | 21                     | 11.45938138 | 0.087264746     |
| 7        | 52                     | 23.6919667  | 0.0422084       |
| 8        | 60                     | 26.56957285 | 0.037637037     |
| 9        | 69                     | 29.71710224 | 0.033650657     |
| 10       | 86                     | 35.45081232 | 0.028208098     |
| 11       | 88                     | 36.10971259 | 0.02769338      |
| $\Sigma$ | n=11                   | 178.1067478 | 2.678948414     |

(Source: Author's processed data, 2024)

Furthermore, to obtain the value of parameter C, the author performs calculations by using the formula  $C = \sum \frac{1}{X^n}$ . The value of n is obtained based on the formula  $b = \frac{n(\Sigma XY) - (\Sigma X \Sigma Y)}{n(\Sigma X^2) - (\Sigma X)^2}$ , where b =

-n, therefore value n = 0.8010. The researcher then determines the value of parameter C based on the formula above and the value contained in Table 6, the value of C = 0.373280797.

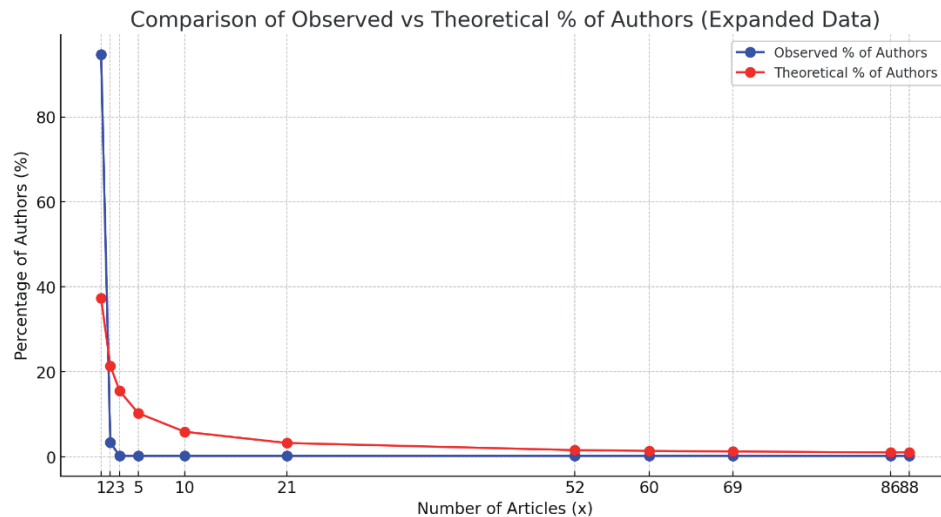
**Table 7.** The percentage of number of authors based on observations and theoretical calculations of Lotka's law

with pattern  $Yx \cdot X^{0.8010} = 0.373280797$

| No       | Number of Articles (x) | Number of Authors (y) | % of observed authors (y') | $X^n$       | C           | % estimation of Lotka theoretical value<br>$Y = \frac{c}{X^n}$ |
|----------|------------------------|-----------------------|----------------------------|-------------|-------------|----------------------------------------------------------------|
| 1        | 1                      | 425                   | 94.65478842                | 1           | 0.373280797 | 37.32808                                                       |
| 2        | 2                      | 15                    | 3.340757238                | 1.742366401 | 0.373280797 | 21.42378                                                       |
| 3        | 3                      | 1                     | 0.222717149                | 2.410999085 | 0.373280797 | 15.48241                                                       |
| 4        | 5                      | 1                     | 0.222717149                | 3.630016101 | 0.373280797 | 10.28317                                                       |
| 5        | 10                     | 1                     | 0.222717149                | 6.32481809  | 0.373280797 | 5.901842                                                       |
| 6        | 21                     | 1                     | 0.222717149                | 11.45938138 | 0.373280797 | 3.257425                                                       |
| 7        | 52                     | 1                     | 0.222717149                | 23.6919667  | 0.373280797 | 1.575559                                                       |
| 8        | 60                     | 1                     | 0.222717149                | 26.56957285 | 0.373280797 | 1.404918                                                       |
| 9        | 69                     | 1                     | 0.222717149                | 29.71710224 | 0.373280797 | 1.256114                                                       |
| 10       | 86                     | 1                     | 0.222717149                | 35.45081232 | 0.373280797 | 1.052954                                                       |
| 11       | 88                     | 1                     | 0.222717149                | 36.10971259 | 0.373280797 | 1.033741                                                       |
| $\Sigma$ |                        | 449                   |                            |             |             |                                                                |

(Source: Author's processed data, 2024)





**Figure 3.** The percentage of number of authors based on observations and theoretical calculations of Lotka's law based on complete count  
(Source: Author's processed data, 2024)

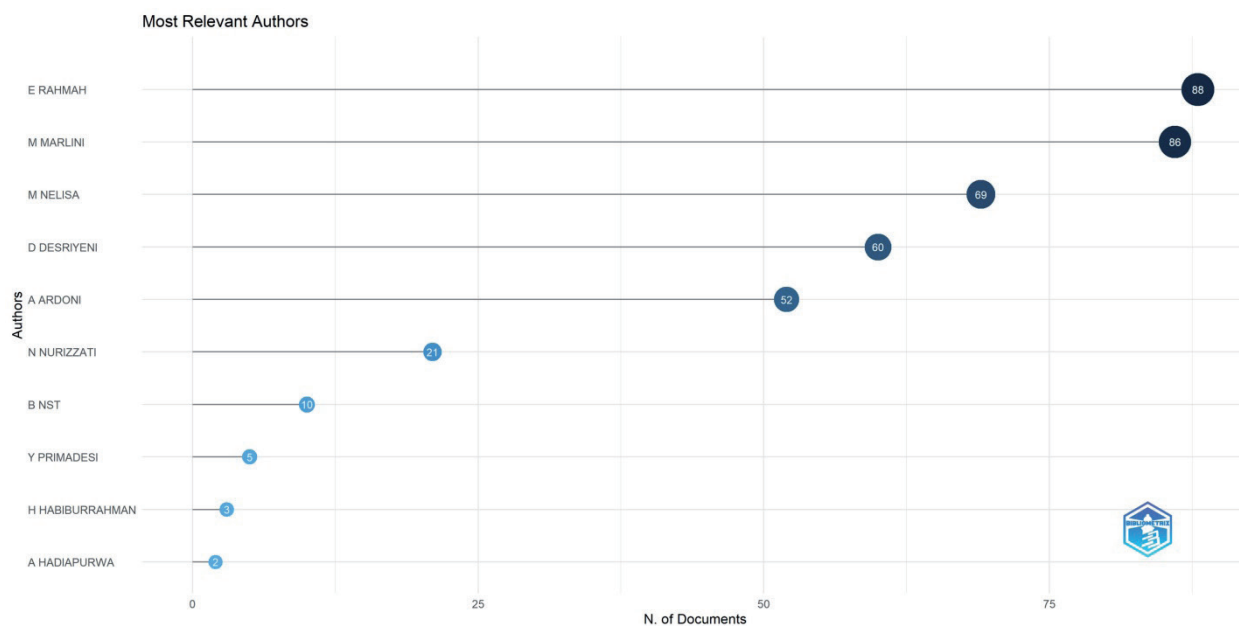
After calculating the value of  $C$ , the researcher calculated the theoretical value of Lotka's theorem by using the formula  $Y = \frac{C}{x^n}$ . Table 7 displays the percentage of authors according to the theoretical Lotka value: From a total of 425 authors, 37.32% wrote at least one article. While the percentage of authors based on observations is 94.65%, the authors who wrote one piece out of 425 authors. According to the findings in Table 7, there is a substantial discrepancy between the percentage of authors based on observations and the percentage of authors based on estimating the theoretical Lotka value, which is 57.32%, or more than 50%.

**Table 8.** The Kolmogorov-Smirnov test

| No | Number of Articles [x] | Number of Authors [y] | % Number of Authors [Y'] | Cumulative Sum Y'[Sn(X)] | Lotka's law Theoretical Frequency [Yx] | Cumulative Sum of Theoretical Frequency [F0(X)] | Dmax  Fo(x)-Sn(x) |
|----|------------------------|-----------------------|--------------------------|--------------------------|----------------------------------------|-------------------------------------------------|-------------------|
| 1  | 1                      | 425                   | 0.946547884              | 0.946547884              | 0.373281                               | 0.373280797                                     | -0.57327          |
| 2  | 2                      | 15                    | 0.033407572              | 0.979955457              | 0.214238                               | 0.587518628                                     | -0.39244          |
| 3  | 3                      | 1                     | 0.002227171              | 0.982182628              | 0.154824                               | 0.742342742                                     | -0.23984          |
| 4  | 5                      | 1                     | 0.002227171              | 0.9844098                | 0.102832                               | 0.845174461                                     | -0.13924          |
| 5  | 10                     | 1                     | 0.002227171              | 0.986636971              | 0.059018                               | 0.904192885                                     | -0.08244          |
| 6  | 21                     | 1                     | 0.002227171              | 0.988864143              | 0.032574                               | 0.936767139                                     | -0.0521           |
| 7  | 52                     | 1                     | 0.002227171              | 0.991091314              | 0.015756                               | 0.952522724                                     | -0.03857          |
| 8  | 60                     | 1                     | 0.002227171              | 0.993318486              | 0.014049                               | 0.966571908                                     | -0.02675          |
| 9  | 69                     | 1                     | 0.002227171              | 0.995545657              | 0.012561                               | 0.979133052                                     | -0.01641          |
| 10 | 86                     | 1                     | 0.002227171              | 0.997772829              | 0.01053                                | 0.989662593                                     | -0.00811          |
| 11 | 88                     | 1                     | 0.002227171              | 1                        | 0.010337                               | 1                                               | 0                 |
| Σ  |                        | 449                   |                          |                          |                                        |                                                 |                   |

(Source: Author's processed data, 2024)

The researcher then used the Kolmogorov-Smirnov test to determine the research hypothesis and calculate the crucial value. The formula  $1.36/\sqrt{N}$  is used to calculate the critical value, which is 0.0642 for  $\alpha=5\%$ . Table 8 depicts the Dmax value. Dmax = 0.57327 is the maximum value obtained by applying an absolute value. Dmax value > critical value, indicating whether or not the alternative hypothesis is accepted according to the Lotka proposition. The percentage distribution of authors based on Lotka's theoretical value estimation differs significantly from that based on observations.



**Figure 4.** The most productive author based on complete counting  
(Source: Author's processed data with R biblioshiny, 2024)

According to Figure 4, E. Rahmah is the most productive author in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan utilizing the complete count method. E Rahmah (88 scientific papers) was the most prolific author in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan, followed by M Marlina (86) and M Nelisa (69).

### 4.3 Proportional counting

The proportional count method is the third strategy to determining author productivity distribution. This method differs from previous studies, which only employed two methods to evaluate the performance of a journal: straight count and complete count. The proportionate count technique calculates an author's points based on their position, and the points are summed; all authors are worth 100% or one. In the procedure, explain the percentage of authors. This proportional count approach assigns a value to each author as a decimal fraction or percentage. The author did not test the Lotka and theorem K-S test, but assesses author productivity by manually calculating the cumulative percentage of articles published in journals. The author with the highest percent value is the most productive.

**Table 9.** The most productive authors

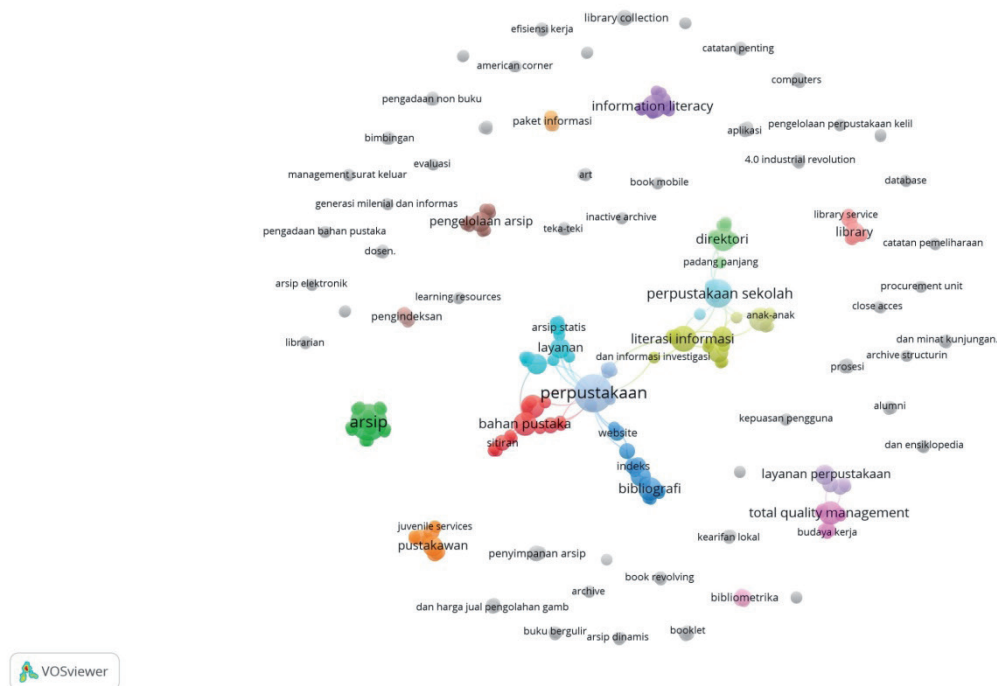
| No | Name            | Number of articles | Total    |
|----|-----------------|--------------------|----------|
| 1  | E Rahmah        | 88                 | 2933.04% |
| 2  | M Marlina       | 86                 | 2866.38% |
| 3  | M Nelisa        | 69                 | 2309.78% |
| 4  | D Desriyeni     | 60                 | 2149.81% |
| 5  | A Ardoni        | 52                 | 1766.50% |
| 6  | N Nurizzati     | 21                 | 699.93%  |
| 7  | B Nst           | 10                 | 333.30%  |
| 8  | Y Primadesi     | 5                  | 233.32%  |
| 9  | N Putri         | 2                  | 200.00%  |
| 10 | F Rahayuningsih | 2                  | 200.00%  |
| 11 | H Habiburrahman | 3                  | 146.67%  |

(Source: Author's processed data, 2024)

Table 9 lists the most productive authors based on proportional calculations. E Rahmah is the most productive author, accounting for 2933.04% of the author's position-based contribution. The total% is the sum of all articles published in the journal according to the author's status.

There is a difference between the Lotka test and the K-S test in research results using the straight count and complete count approaches. The straight count method is utilized, the null hypothesis is accepted, and the author's distribution in the journal corresponds to the Lotka assertion. While the methodology uses the complete count method, the alternative hypothesis is accepted, resulting in a distribution of authors in the journal that does not reflect the Lotka proposition. Previous research employed the Lotka proposition's straight count method to analyze articles (Naqvi & Fatima, 2017). However, the data utilized to analyze the journal was gathered over a relatively short period of time, between 2012 and 2014. While lotka postulate research takes a long time, lotka analysis is appropriate for huge data sets (Da Silva et al., 2018). Previous research using the straight count method to analyze journals in the United States and the United Kingdom over a decade (2007-2017) found data that refuted the lotka hypothesis (Bisaria, 2020).

D Desriyeni is the most productive author to employ the straight count method. While the most productive authors use both the complete count and the proportional count techniques, one author uses both strategies equally well: E Rahmah. has 88 scientific articles in the journal, with a total cumulative percentage of 2933.04%. The researcher use a scientometric approach to analyze the distribution of study subjects that the most productive authors commonly investigate.



**Figure 5.** The Visualization of the subject of Elva Rahmah's scientific work  
(Source: Author's processed data with VOSViewer, 2024)

Figure 5 shows that E Rahmah's research themes in the Jurnal Ilmu Informasi Perpustakaan dan Kearsipan publications are diverse and not narrowly focused. E Rahmah's research topic was not concentrated; hence the study was not in-depth or complete. As a result, the visibility of potential citations decreases. E Rahmah is a lecturer at Padang State University, which publishes the journal Jurnal Ilmu Informasi Perpustakaan dan Kearsipan. According to the conclusions of this study, the use of straight count, complete count, and proportional count methods to evaluate

journal performance is heavily influenced by the journal's condition. Professional journal indicators determined using the straight and complete count method and Lotka's law approach will be fit with Lotka's law. The use of straight count, complete count will be in compliance with the Lotka's law concept provided the journal administration is done correctly.

## 5. CONCLUSION

Lotka's law method is used to assess author productivity and professionalism in journals using straight count and complete count. This study finds the distribution of authors in Jurnal Ilmu Informasi Perpustakaan dan Kearsipan using the straight count method, demonstrating that it adheres to the Lotka test. The Lotka test does not apply to the results of a study on author distribution in the Jurnal Ilmu Informasi Perpustakaan dan Kearsipan that used the complete count approach. D Desriyeni is the most productive author in the Jurnal Ilmu Informasi Perpustakaan dan Kearsipan according to the straight count approach. E Rahmah, on the other hand, is the most productive author who employs the complete and proportional count methods. Based on the results of this study, this journal is not a professional journal. Professional journal indicators determined using the straight and complete count method and Lotka's law approach will be consistent with Lotka's law. Professional journal management can increase the effect (impact factor) over time. However, this study has numerous disadvantages. The lotka's law approach requires vast amounts of data. Therefore, the volume of data must be sufficient, and the time period must be longer. This research contributes scientifically, particularly for journal managers who publish articles; it should not be based solely on the author's popularity. However, it must prioritize the quality of research findings and conduct the review process fairly. Suggestions for further research Lotka's law approach, which uses straight and complete counts, can be used to quantify the professionalism of a journal in producing and disseminating papers.

## DECLARATIONS

### Data Availability

The dataset supporting the findings of this study is available in the RIN Dataverse repository: Ibrahim, Cecep; Suaib, Eka; Jaya, Asrul; Ramadhan R, Moh. Ricky; Pebrianti, Hera; Hamzah, Muthmainnah Aufaa, 2026, "Research Evaluation: Propose Method to Assess Professionalism Journal (Evaluasi Penelitian: Mengusulkan Metode untuk Menilai Profesionalisme Jurnal)", <https://hdl.handle.net/20.500.12690/RIN/3PJZDF>, RIN Dataverse, V1, UNF:6:xvTif3iRoVML7PGbF2tq3A== [fileUNF]

### CRedit (Contributor Roles Taxonomy)

**Cecep Ibrahim:** Conceptualization, Methodology, Software, Formal Analysis, Data Curation, Writing—Original Draft Preparation, Supervision, Validation. **Eka Suaib:** Supervision, Writing—Review and Editing. **Asrul Jaya:** Investigation, Validation. **Moh. Ricky Ramadhan R.:** Data Curation, Visualization. **Hera Pebrianti:** Investigation, Writing—Review and Editing. **Muthmainnah Aufaa Hamzah:** Resources, Project Administration.

### Funding statement

The author(s) received no financial support for the research, authorship, and/or publication of this article

### Competing interest

I state that there are no known conflicts of interest linked with this publication, and that there has been no significant financial assistance for this work that could have influenced its outcome.

## The use of AI or AI-assisted technologies

The authors did not use any AI tools in the preparation of this work.

## ACKNOWLEDGMENTS

There are no specific acknowledgments to be mentioned. The work is solely done by the authors.

## REFERENCES

- Adnan, M. S. Bin, Hart, A., Hertelendy, A. J., Tin, D., Abelan, S.-M., Issa, F., & Ciotto, G. R. (2022). Malaysian Disaster Medicine Research: A Bibliographic Study of Publication Trends. *Prehospital and Disaster Medicine*, 37(6), 836 – 842. <https://doi.org/10.1017/S1049023X22002187>
- Ahmadi, A. (2019). The use of SINTA (Science and technology index) database to map the development of literature study in Indonesia. *International Journal of Mechanical Engineering and Technology*, 10(2), 918–923. [https://doi.org/https://iaeme.com/Home/article\\_id/IJMET\\_10\\_02\\_096](https://doi.org/https://iaeme.com/Home/article_id/IJMET_10_02_096)
- Al-Raei, M. (2023). Analysing of the sustainable development goals in Damascus University during Syrian crisis using the strategy in the university and the bibliometrics data from SciVal. *Discover Sustainability*, 4(1). <https://doi.org/10.1007/s43621-023-00140-y>
- Alshaikh, N. A. (2023). COVID-19 associated coagulopathy: A bibliometric investigation. *Heliyon*, 9(6). <https://doi.org/10.1016/j.heliyon.2023.e16507>
- Amanullah, A., Rajeswari, S., & Gul, S. (2025). Testing the Applicability of Lotka’s Law, Bradford’s Law, and Zipf’s Law on Gastritis Research Output. *DESIDOC Journal of Library and Information Technology*, 45(4), 386–402. <https://doi.org/10.14429/djlit.21019>
- Asatani, K., Oki, S., Momma, T., & Sakata, I. (2023). Quantifying progress in research topics across nations. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-31452-8>
- Aytac, S., Tran, C. Y., & Frye, N. (2025). Lotka’s Law of Scientific Productivity Across the Research Disciplines: A Review. *Science and Technology Libraries*. <https://doi.org/10.1080/0194262X.2025.2503941>
- Barbu, L. (2023). Global trends in the scientific research of the health economics: a bibliometric analysis from 1975 to 2022. *Health Economics Review*, 13(1). <https://doi.org/10.1186/s13561-023-00446-7>
- Bisaria, G. (2020). Lotka’s Law and Authorship trends in Library and Information Science: A study based on select journals of India, US and UK. *Library Philosophy and Practice*, 2020(September), 1–22.
- Bolaños, M. C., Espinoza, R. V., Pezoa-Fuentes, P., More, C. C., Opazo, A. B., Galdámez, F. E., Albornoz, C. U., Torres, J. S., Choque, C. L. T., & Campos, R. G. (2022). Bibliometrics of Scientific Productivity on Physical Activity in Children and Adolescents With Autism Spectrum Disorder and Down Syndrome. *International Electronic Journal of Elementary Education*, 15(1), 43–52. <https://doi.org/10.26822/iejee.2022.277>
- Caballero, E. G., Villamarín, A. T., & Díaz, C. R. (2023). Big Data and Social Sciences. A comparative review at anthropology, sociology, and social work publications; [Big data y ciencias sociales. Una mirada comparativa a las publicaciones de antropología, sociología y trabajo social]. *Gazeta de Antropologia*, 39(1). <https://doi.org/10.30827/Digibug.79779>
- Carlos, M. D., Josue, R. D., & Carla, S. C. (2024). Bibliometric studies. An option to develop research in surgery and related disciplines. *Revista de Cirugia*, 76(2), 147–156. <https://doi.org/10.35687/s2452-454920240021890>
- Chen, L., Du, Z., He, L., & Jiang, N. (2023). Research advances and hotspot analysis of “carbon neutral” in wastewater treatment, based on bibliometrics; [基于文献计量分析的污水处理“碳中和”研究现状与热点]. *Chinese Journal of Applied and Environmental Biology*, 29(2), 297 – 305. <https://doi.org/10.19675/j.cnki.1006-687x.2022.08025>
- Cheng, P., Tang, H., Lin, F., & Kong, X. (2023). Bibliometrics of the nexus between food security and carbon emissions: hotspots and trends. *Environmental Science and Pollution Research*, 30(10), 25981 – 25998. <https://doi.org/10.1007/s11356-022-23970-1>
- Chirinos, J. W. C., Barturén, F. F. R., Nuñez, M. M., & Barrantes, S. I. A. (2023). Bibliometrics of scientific production on teacher emotional intelligence in learning environments; [Bibliometría de la producción científica sobre Inteligencia emocional docente en entornos de aprendizaje]. *Revista de Ciencias Sociales*, 29(2), 471 – 482. <https://doi.org/10.31876/rcs.v29i2.39989>



- Da Silva, S., Perlin, M., Matsushita, R., Santos, A. A. P., Imasato, T., & Borenstein, D. (2018). Lotka's law for the Brazilian scientific output published in journals. *Journal of Information Science*, 45(5), 1–5. <https://doi.org/10.1177/0165551518801813>
- Da Silva, S., Perlin, M., Matsushita, R., Santos, A. A. P., Imasato, T., & Borenstein, D. (2019). Lotka's law for the Brazilian scientific output published in journals. *Journal of Information Science*, 45(5), 705–709. <https://doi.org/10.1177/0165551518801813>
- Desai, N., Veras, L. V., & Gosain, A. (2018). Using bibliometrics to analyze the state of academic productivity in US pediatric surgery training programs. *Journal of Pediatric Surgery*, 53(6), 1098–1104. <https://doi.org/10.1016/j.jpedsurg.2018.02.063>
- Donner, P. (2020). A validation of coauthorship credit models with empirical data from the contributions of phd candidates. *Quantitative Science Studies*, 1(2), 551–564. [https://doi.org/10.1162/qss\\_a\\_00048](https://doi.org/10.1162/qss_a_00048)
- Dželalija, G., & Roić, M. (2023). Bibliometrics on Public Utilities Registration Research. *Land*, 12(5). <https://doi.org/10.3390/land12051097>
- Egghe, L., Rousseau, R., & Van Hooydonk, G. (2000). Methods for accrediting publications to authors or countries: Consequences for evaluation studies. *Journal of the American Society for Information Science and Technology*, 51(2), 145–157. [https://doi.org/10.1002/\(SICI\)1097-4571\(2000\)51:2<145::AID-ASI6>3.0.CO;2-9](https://doi.org/10.1002/(SICI)1097-4571(2000)51:2<145::AID-ASI6>3.0.CO;2-9)
- Fadhli, R., Rahmat, B., Ibrahim, C., & Eka Kurnia, B. (2023). Uncovering patterns of author productivity in educational leadership and management in Indonesia: A bibliometric study using lotka's law. *Record and Library Journal*, 9(2), 306–318. <https://doi.org/10.20473/rlj.V9-I2.2023.306-318>
- Fox, E. S., McDonnell, J. M., Wall, J., Darwish, S., Healy, D., & Butler, J. S. (2024). The correlation between altmetric score and traditional measures of article impact for studies published within the Surgeon Journal. *Surgeon*, 22(1), 18–24. <https://doi.org/10.1016/j.surge.2023.09.005>
- Hasenay, S., & Ačkar, Đ. (2022). Bibliometric Analysis of the Scientific Research of Food Industry By-Products in the Period 1976–2021. *Sustainability (Switzerland)*, 14(24). <https://doi.org/10.3390/su142416910>
- Ivanović, L., Baaden, P., Jovanović, M., & Ivanović, D. (2025). Correlation between journal metrics-based academic evaluation and researchers' ethics. *Accountability in Research*, 32(4), 459–487. <https://doi.org/10.1080/08989621.2023.2295415>
- Kalcioğlu, M. T., Ileri, Y., Ozdamar, O. I., Yilmaz, U., & Tekin, M. (2018). Evaluation of the academic productivity of the top 100 worldwide physicians in the field of otorhinolaryngology and head and neck surgery using the Google Scholar h-index as the bibliometrics ranking system. *Journal of Laryngology and Otology*, 132(12), 1097–1101. <https://doi.org/10.1017/S0022215118002190>
- Kim, E., & Atteraya, M. (2024). Analyzing the Degree of Changes in Indexed Journals: The Case of SJR Database. *Publishing Research Quarterly*, 40(2), 129–146. <https://doi.org/10.1007/s12109-024-09991-3>
- Kushairi, N., & Ahmi, A. (2021). Flipped classroom in the second decade of the Millenia: a Bibliometrics analysis with Lotka's law. *Education and Information Technologies*, 26(4), 4401–4431. <https://doi.org/10.1007/s10639-021-10457-8>
- Lee, Juhyun, Park, S., & Lee, Junseok. (2023). Citationwalk: Network representation learning with scientific documents. *Expert Systems with Applications*, 227, 120372. <https://doi.org/10.1016/j.eswa.2023.120372>
- Lee, Y. (2022). An Extension of the Lindström-Gessel-Viennot Theorem. *The Electronic Journal of Combinatorics*, 29(2), 1–31. <https://doi.org/10.37236/10913>
- Li, J., Cossette-Roberge, H., Toffa, D. H., Deacon, C., & Keezer, M. R. (2023). Sudden unexpected death in epilepsy (SUDEP): A bibliometric analysis. *Epilepsy Research*, 193, 107159. <https://doi.org/10.1016/j.epilepsyres.2023.107159>
- Li, V. (2022). Mapping the health science librarianship research field in 2012 – 2022. *Journal of the Canadian Health Libraries Association / Journal de l'Association Des Bibliothèques de La Santé Du Canada*, 43(3), 93 – 103. <https://doi.org/10.29173/jchla29626>
- Li, X., Wu, L., Yu, L., He, Y., Wang, M., & Mu, Y. (2023). Policy analysis in the field of rare diseases in China: a combined study of content analysis and Bibliometrics analysis. *Frontiers in Medicine*, 10. <https://doi.org/10.3389/fmed.2023.1180550>
- Liu, D., Yao, Z., Yang, X., Xiong, C., & Nie, Q. (2023). Research Progress and Trend of Agricultural Non-Point Source Pollution from Non-Irrigated Farming Based on Bibliometrics. *Water*, 15(8), 1610. <https://doi.org/10.3390/w15081610>



- López-Muñoz, F., Velázquez-Pérez, L., González Garcés, Y., López-Vázquez, I., Rodríguez Labrada, R., Medrano Montero, J., & Povedano Montero, F. J. (2023). Bibliometrics and network mapping of Cuban international scientific production on ataxias (1993-2020); [Bibliometría y mapeo de redes de la producción científica internacional de Cuba sobre ataxias (1993-2020)]. *Revista Cubana de Informacion En Ciencias de La Salud*, 34. [https://doi.org/http://scielo.sld.cu/scielo.php?pid=S2307-21132023000100016&script=sci\\_abstract&tlng=en](https://doi.org/http://scielo.sld.cu/scielo.php?pid=S2307-21132023000100016&script=sci_abstract&tlng=en)
- Lu, H., Zhang, W., Diao, B., Liu, Y., Chen, H., Long, R., & Cai, S. (2023). The progress and trend of pro-environmental behavior research: a bibliometrics-based visualization analysis. *Current Psychology*, 42(8), 6912 – 6932. <https://doi.org/10.1007/s12144-021-01809-1>
- Mehta, K. M., Petersen, K. L., Goodman, S., Sørensen, H. T., Bøgsted, M., Olesen, J. D., Burks, S., Shaw, R. E., Hove, J. D., Ousager, J., Milla, C., Andersen, V., Ejlskjær, N., Brix-Christensen, V., Ghose, S., Kjær, A., & Chin-Hong, P. V. (2023). The Danish-American Research Exchange (DARE): a cross-sectional study of a binational research education program. *BMC Medical Education*, 23(1). <https://doi.org/10.1186/s12909-023-04002-z>
- Melero-Fuentes, D., Aguilar-Moya, R., Valderrama-Zurán, J.-C., & Gorraiz, J. (2025). Evolution and effect of meeting abstracts in JCR journals. *Journal of Informetrics*, 19(1). <https://doi.org/10.1016/j.joi.2024.101631>
- Mitrović, I., Mišić, M., & Protić, J. (2023). Exploring high scientific productivity in international co-authorship of a small developing country based on collaboration patterns. *Journal of Big Data*, 10(1). <https://doi.org/10.1186/s40537-023-00744-1>
- Mohammed, A. M., Aziz, F., Mohtar, S. S., Mhamad, S. A., Ahmadu, B., Nasir, M. U., Muhammad, K. Y., & Aziz, M. (2023). A review of research trends on the usage of photocatalysis for wastewater treatment: bibliometric analysis. *Sustainable Water Resources Management*, 9(3). <https://doi.org/10.1007/s40899-023-00868-5>
- Mullins, C. H., Boyd, C. J., & Corey, B. L. (2020). Examining the Correlation Between Altmetric Score and Citations in the General Surgery Literature. *Journal of Surgical Research*, 248, 159–164. <https://doi.org/10.1016/j.jss.2019.11.008>
- Naheem, K. T., Sivaraman, P., & Saravanan, G. (2019). Application of Lotka's law in Bell's palsy (facial paralysis) research output during 2004 - 2018. *Library Philosophy and Practice*, 2019. <https://doi.org/https://digitalcommons.unl.edu/libphilprac/2892/>
- Naqvi, S. H., & Fatima, N. (2017). Authorship patterns in international business literature: Applicability of Lotka's law. *Annals of Library and Information Studies*, 64(4), 253–259.
- Nuryana, Z., Xu, W., Lu, S., Tasir, Z., & Suyadi, S. (2023). Mapping global research on shadow education: Trends and future agenda. *International Journal of Evaluation and Research in Education*, 12(2), 1105 – 1113. <https://doi.org/10.11591/ijere.v12i2.24667>
- Qua, K., Yu, F., Patel, T., Dave, G., Cornelius, K., & Pelfrey, C. M. (2021). Scholarly productivity evaluation of KL2 scholars using bibliometrics and federal follow-on funding: Cross-institution study. *Journal of Medical Internet Research*, 23(9). <https://doi.org/10.2196/29239>
- Sahu, A., & Jena, P. (2022). Lotka's law and author productivity pattern of research in law discipline. *Collection and Curation*, 41(2), 62–73. <https://doi.org/10.1108/CC-04-2021-0012>
- Sharma, K., Moyer, J., Liggins, C., Garcia-Cazarin, M., Mandal, R. J., Wanke, K. L., & Meissner, H. I. (2023). Impact of National Institutes of Health and Food and Drug Administration Tobacco Research Funding: A Bibliometrics Analyses. *Nicotine & Tobacco Research : Official Journal of the Society for Research on Nicotine and Tobacco*, 25(6), 1082 – 1089. <https://doi.org/10.1093/ntr/ntad024>
- Sharma, S., Miller, A. S., Pearson, Z., Harris, A. B., Tran, A., Ahmed, I., Best, M. J., & Srikumaran, U. (2023). Correlation between Altmetric score and traditional bibliometric measures for total shoulder arthroplasty manuscripts. *Seminars in Arthroplasty JSES*, 33(2), 401–406. <https://doi.org/10.1053/j.sart.2023.01.007>
- Shi, J., Jin, P., & Gu, S. (2019). Research on credit distribution of cooperative papers according to authors' rank. *ACM International Conference Proceeding Series*. <https://doi.org/10.1145/3321408.3326684>
- Shiah, E., Heiman, A. J., & Ricci, J. A. (2023). Evaluation of the i10-Index in Plastic Surgery Research and its Correlation with Altmetric Attention Scores and Traditional Author Bibliometrics: An Evaluation of a Single Journal. *Indian Journal of Plastic Surgery*, 56(1), 68 – 73. <https://doi.org/10.1055/s-0043-1760827>
- Singh, H., & Jaiswal, B. (2025). Authorship Dynamics and Lotka's Law Applicability in the Realm of Archaeology. *DESIDOC Journal of Library and Information Technology*, 44(6), 374–383. <https://doi.org/10.14429/djlit.44.6.20153>

- Singh, P. K. (2023). Research impact analysis of an institute using Scopus data and its hierarchical order visualization. *Quality and Quantity*, 57(3), 2859 – 2892. <https://doi.org/10.1007/s11135-022-01504-8>
- Suprpto, N., Kusnanik, N. W., Iriani, S. S., Wibawa, S. C., Yulianto, B., & Hariyanto, A. (2021). The Comparison of Scimago Institutions Rankings (SIR), Scopus, and SINTA Profile: A Case of The Top Indonesian Institutions. *Library Philosophy and Practice*, 2021, 1–11. <https://doi.org/https://digitalcommons.unl.edu/libphilprac/5788/>
- Thompson, D. F., & Walker, C. K. (2015). A descriptive and historical review of bibliometrics with applications to medical sciences. *Pharmacotherapy*, 35(6), 551–559. <https://doi.org/10.1002/phar.1586>
- Todeschini, R., & Baccini, A. (2016). *Handbook of Bibliometric Indicators: Quantitative Tools for Studying and Evaluating Research*. Wiley-VCH.
- Tunga, S. K. (2021). Lotka's Law and Author Productivity in the Economic Literature: A Citation Study. *Indian Journal of Information Sources and Services*, 11(2), 1–8. <https://doi.org/10.51983/ijiss-2021.11.2.2998>
- Valizadeh-Haghi, S., Nasibi-Sis, H., Shekofteh, M., & Rahmatizadeh, S. (2022). ResearchGate Metrics' Behavior and Its Correlation with RG Score and Scopus Indicators A Combination of Bibliometric and Altmetric Analysis of Scholars in Medical Sciences. *Information Technology and Libraries*, 41(1). <https://doi.org/10.6017/ital.v41i1.14033>
- Vivarelli, M. (2023). The role of peer review in the evaluation of research in Italy. Some remarks on the evaluation of PRINs; [Il ruolo della peer review nella valutazione della ricerca in Italia. Alcune considerazioni sulla valutazione dei PRIN]. *JLIS.It*, 14(1), 121 – 137. <https://doi.org/10.36253/jlis.it-500>
- Wang, F., Jia, C., Wang, X., Liu, J., Xu, S., Liu, Y., & Yang, C. (2019). Exploring all-author tripartite citation networks: A case study of gene editing. *Journal of Informetrics*, 13(3), 856–873. <https://doi.org/10.1016/j.joi.2019.08.002>
- Wang, G., Wang, H., & Wang, L. (2023). Research trends in tourism and hospitality from 1991 to 2020: an integrated approach of corpus linguistics and bibliometrics. *Journal of Hospitality and Tourism Insights*, 6(2), 509 – 529. <https://doi.org/10.1108/JHTI-09-2021-0260>
- Yanhui, S., Lijuan, W., & Shiji, C. (2022). An exploratory study of the all-author bibliographic coupling analysis: Taking scientometrics for example. *Journal of Information Science*, 48(6), 767 – 782. <https://doi.org/10.1177/0165551520981293>
- Zakaria, W. N. A., Wijaya, A., Al-Rahbi, B., Ahmad, A. H., Zakaria, R., & Othman, Z. (2023). Emerging trends in gene and bipolar disorder research: a bibliometric analysis and network visualisation. *Psychiatric Genetics*, 33(3), 102 – 112. <https://doi.org/10.1097/YPG.0000000000000338>
- Zhang, Y., Zhang, J., & Qi, L. (2023). Analysis of Hotspots and Trends in Digitalization Research of Chinese Archives Based on Bibliometrics. *Sustainability (Switzerland)*, 15(9). <https://doi.org/10.3390/su15097679>
- Zharova, A., Härdle, W. K., & Lessmann, S. (2023). Data-driven support for policy and decision-making in university research management: A case study from Germany. *European Journal of Operational Research*, 308(1), 353 – 368. <https://doi.org/10.1016/j.ejor.2022.10.016>

**Correction Note:** The authorship list for this article has been updated to align with the official institutional research report. By mutual consent, Rahmat Fadhli has been removed from the list, while Asrul Jaya, Moh. Ricky Ramadhan R, Hera Pebrianti, and Muthmainnah Aufaa Hamzah have been added. This administrative correction does not affect the scientific integrity of the study.

**Corrected Author List:** Cecep Ibrahim, Eka Suaib, Asrul Jaya, Moh. Ricky Ramadhan R., Hera Pebrianti, Muthmainnah Aufaa Hamzah.

*For detailed author contributions and the official signed declaration, please refer to the attached Authorship Change Consent Form that available in the Galley File.*