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In-Depth Examination of Coverage Duration: Analyzing Years Covered and Skipped in Journal Indexing

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Abstract: Journals that have consistently maintained uninterrupted indexing over an extended period can be assumed to possess stability and sustainability in journal indexing. Building on this assumption, the objective of this study is to scrutinize the years omitted in the indexing of Scopus-indexed journals. To conduct this study, three coverage duration indicators—nyears-covered (total years covered), nyears-skipped (years skipped), and skipped/covered ratio (proportion of years skipped to total years covered)—were formulated. Data from SCImago Journal Rank (SJR) for 2022, consisting of 16,762 records (62% of downloaded data) with a coverage duration of 25 years or less, were used for this study. The results revealed that around 10% of Scopus-indexed journals experienced exclusions or coverage gaps. Longer coverage correlates positively with documents published, h-index, and citations, while skipped years decrease with these indicators. Open access (OA) journals exhibited a lower skipped/covered ratio than non-OA journals, suggesting a better sustainability of indexing than non-OA journals. Disciplinary differences in Scopus journal coverage duration revealed notable variation, suggesting that coverage duration indicators can be effectively used to evaluate journal stability within Scopus. Overall, the coverage gaps reflect Scopus's efforts to regulate the journals it indexes. The coverage duration indicators proposed in this study can be applied to assess the stability of periodicals in any database, providing insights into the broader dynamics and quality standards maintained by a database, where the database periodically adds and removes its indexed contents.

Keywords: coverage duration; stability of indexing; journal indicator; years covered; years skipped

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1. Introduction

Journal indexing is an important aspect of scholarly communication. The credibility of research works relies on the peer review process and the selective inclusion of journals in databases [1,2]. Thus, database providers regularly update their indexes to maintain high quality standards [3]. While some journals are included in a database, others may be removed, and delisting can occur due to reasons such as low bibliometric indicators, concerns about publisher standards, or unusual behavior [4,5]. Regardless of the reasons behind delisting, journals may occasionally regain inclusion in a database, resulting in gaps in coverage. Thus, it is useful to consider these gaps when evaluating the duration of a journal's coverage. Such consideration is vital for a comprehensive assessment of the scholarly communication landscape. We can assume that journals that have been indexed in a database for a long period of time without interruption are likely to show stability and sustainability in their ability to be included in a database.

To quantitatively assess the extent of these gaps, it is necessary to examine the historical coverage of journals in the database. Exploring the concept of 'coverage duration' and its associated indicators is useful for analyzing past coverage history. Coverage duration can be defined in two ways: (a) from the initial indexing year to the current indexing year, or (b) from the initial indexing year to the current indexing year, excluding the years

not indexed (skipped). The latter definition, excluding the years not indexed (skipped), provides a more precise depiction of coverage duration and more accurate information.

This study proposes three indicators to measure how a journal has been covered (indexed) in a database: nyears-covered, nyears-skipped, and the skipped/covered ratio. Nyears-covered represents the total years covered, while nyears-skipped denotes the number of skipped years during the coverage period. The skipped/covered ratio is the proportion of skipped years to the total years covered, calculated by dividing nyears-skipped by nyears-covered.

Scopus provides specific years indicating when a journal was indexed in the database. The gap year can be inferred by analyzing the data on the years covered. For example, if a journal's coverage is listed as '2017, 2019–2021', the nyears-covered would be 4 (1 year for 2017 and 3 years for 2019–2021). The nyears-skipped would be 1 (referring to the year 2018). Calculating the skipped/covered ratio as 1 year out of 4 years results in a ratio of 0.25. Using such coverage information, the objective of this study is to examine indexing gaps of journals by empirically analyzing Scopus-indexed journals, journals' open access (OA) status, journal metrics, and subject areas. Scopus journals were selected as a case study, with the SCImago Journal Rank (SJR) portal [6] serving as a proxy for journals indexed by Scopus. This paper demonstrates that examining the historical coverage of journals using coverage duration indicators can offer a better understanding of the intricate fluctuations of bibliographic databases and their indexed journals.

2. Related Studies

There is a plethora of previous research related to database coverage as it is an important issue in the analysis of scholarly publications. Databases have different scopes and coverage policies that could affect the research output of a group. For example, the extent to which a particular database covers academic journals from a country can have a significant impact on the accuracy and reliability of the data used to assess a country's productivity. This is evident in previous studies such as those conducted by Basu [7], Erfanmanesh et al. [8], and Singh et al. [9]. Other studies [10,11] have explored different aspects of database coverage, including subject areas, geographical areas, publishers, journal impact, and journal language, underscoring the complexity of the issue and the need for an improved understanding of database coverage in scholarly research.

Several prior studies have mentioned the number of years covered by bibliographic databases, such as the Medical Research Council [12] and Toom [13]. However, these studies were generally less specific in defining the number of years covered and did not address how gaps in coverage were handled. In a bibliometric study, Jokic et al. [14] used the number of years covered in Scopus as a proxy for journal age. Kim and Jeong [15] compared Scopus journals published in East Asian countries (China, Japan, South Korea, and Taiwan) with the number of years covered in Scopus. The authors found that the median number of years covered by the SJR was highest for Japanese journals and lowest for South Korean journals. Their study suggested that most journals published in South Korea have only been recently indexed in the SJR, whereas the high number of median years covered in Japanese journals indicates that a significant number of Japanese journals indexed by the SJR are much older than journals from other East Asian countries. Although these studies imply that the number of years covered can be used in bibliometric research, its usefulness as an indicator of coverage has not been extensively explored.

Furthermore, there is a lack of empirical studies examining the coverage duration of journals and related indicators. Jacso [16] argued that core or high-profile journals should not have gaps in indexed coverage. However, to the best of our knowledge, no studies have empirically analyzed the number of years covered, along with the number of skipped years, in terms of database coverage. Moreover, previous studies have generally focused on the presence or absence of journals at a single point in time, without considering how journals are added and removed over time. For example, while Frandsen [17] investigated

changes in coverage from one year to another in PubMed, their study did not provide a method to evaluate the individual inclusion of journals in the database.

In sum, prior studies have not adequately accounted for potential skipped years in the coverage of journal indexing in databases. This study introduces a novel approach to analyzing bibliographic database coverage by examining the stability of journal indexing over time. Through an analysis of the coverage duration of journals in Scopus, this study contributes new perspectives concerning the nature of Scopus database coverage and offers a novel method for analyzing journals with indexing gaps.

3. Methods

To conduct this study, all 27,033 journals indexed in the SJR for 2022 were downloaded, encompassing those covered by Scopus for that year or the preceding one. While the SJR encompasses all Scopus-indexed journals, a minor discrepancy may arise due to the lag time between Scopus, which updates lists more frequently, and the SJR, which publishes lists annually based on the Scopus database. The SJR provided additional metrics such as the journal h-index [18,19] and quartiles (Q1 to Q4). SJR quartiles are determined based on SJR scores (Source Normalized Impact per Paper). The SJR score is determined by the number and importance of citations, as well as the prestige of the journals that cited it [20]. These quartiles represent how a journal performs relative to others in the same subject category.

The data selection approach used in this study addresses historical indexing considerations and enhances the reliability of Scopus data for analysis. Scopus was launched in 2004, and although selective in its indexing decisions. Thelwall and Sud [21] suggested that 1996 is often considered a reasonable starting point for more accurate, reliable coverage information of its indexed journals. This study found that, for older journals, Scopus contained what appears to be the inception date of the journal for their coverage information. This was clearly incompatible between older journals indexed in or before 1996 and those indexed after. Consequently, this study chose to exclude 10,271 journals (approximately 38% of the initial dataset) that had coverage information in and prior to 1996 due to incompatibilities and unreliability. This exclusion applied to journals with an nyears-covered duration of 26 years or more.

The resulting dataset of 16,762 records (approximately 62% of downloaded records) was utilized for this study. Selecting this dataset for analysis involves nuanced considerations due to retrospective indexing and compatibility issues. These records underwent processing, and the values of coverage duration indicators for the journals in the dataset were calculated using the R programming language. This study examined the coverage duration indicators of this dataset, taking into account various journal metrics, such as total documents published in 2022, h-index, SJR journal quartiles, and citations for 2 years. Furthermore, journal types (OA versus non-OA) and subject areas of Scopus-indexed journals were analyzed in terms of coverage duration indicators.

4. Results

4.1. Distribution of Nyears-Skipped and Nyears-Covered

In Figure 1, the distribution and association between nyears-skipped and nyears-covered are illustrated. Since nyears-skipped is dependent on nyears-covered, which was limited to 25 years, nyears-skipped is limited to 24 years. As shown, there is a wide variation among the journals indexed in Scopus in terms of nyears-skipped and nyears-covered. Only half of the figure is populated with dots. The regression line indicates a slight upward trend. There is a negligible positive correlation (0.029) between nyears-skipped and nyears-covered, suggesting that as the nyears-covered increases, nyears-skipped tends to increase slightly.

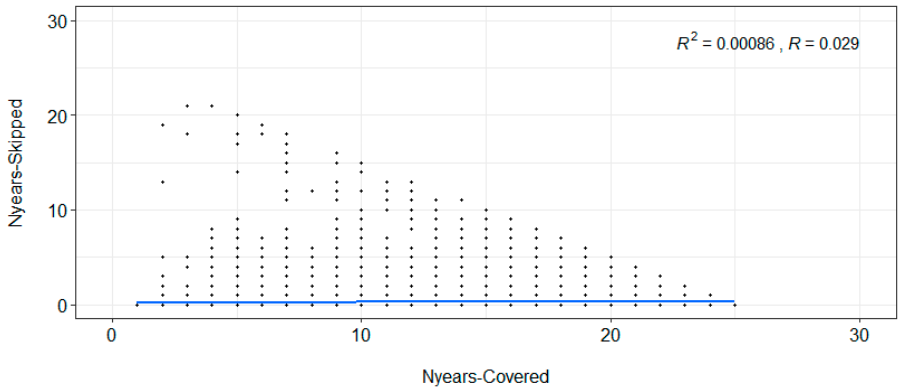

Figure 1. Association Between Nyears-Covered and Nyears-Skipped.

4.2. Distribution of Coverage Duration Indicators

Figure 2 illustrates the proportion of journals with and without gaps in their indexing in Scopus. Out of a dataset of 16,762 records, the majority of indexed journals in the SJR do not have any gaps in their coverage, constituting 90.01% of the total with a frequency of 15,087. This subset of journals signifies positive traits of stability, reliability, and a robust indexing presence. In contrast, a smaller proportion of 9.99% (1675 journals) have at least a one-year gap in their indexing in Scopus, suggesting that approximately 10% of the indexed journals encountered challenges in maintaining uninterrupted indexing status at some point within the covered span.

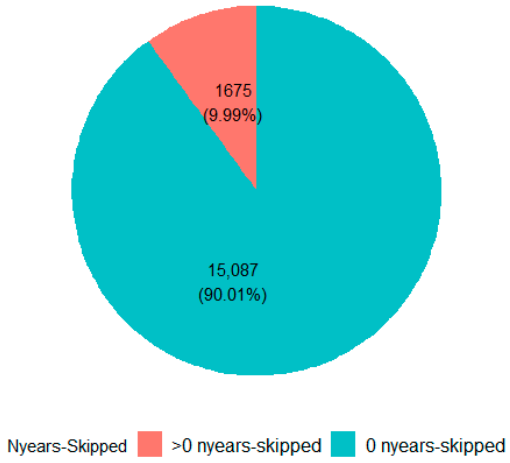

Figure 2. Proportions of 0 and >0 Nyears-Skipped.

Figure 3 illustrates the distribution of coverage duration indicators for the selected journals. On the left side of the figure, the median and mean of nyears-covered are 11 and 11.46 years, respectively. These values are slightly less than half of the 25-year coverage window selected for this study. The mean and median nyears-skipped are 0.27 and 0, respectively. Additionally, the skipped/covered ratios generally fall between 0 and 0.3 and have mean and median values of 0.03 and 0, respectively. These results suggest that once journals are covered in Scopus, they tend to maintain continuous coverage. The distribution of nyears-skipped and the skipped/covered ratio indicate that a small portion of journals may experience exclusion from indexing or have gaps in their coverage. These results are consistent with those presented in Figure 2.

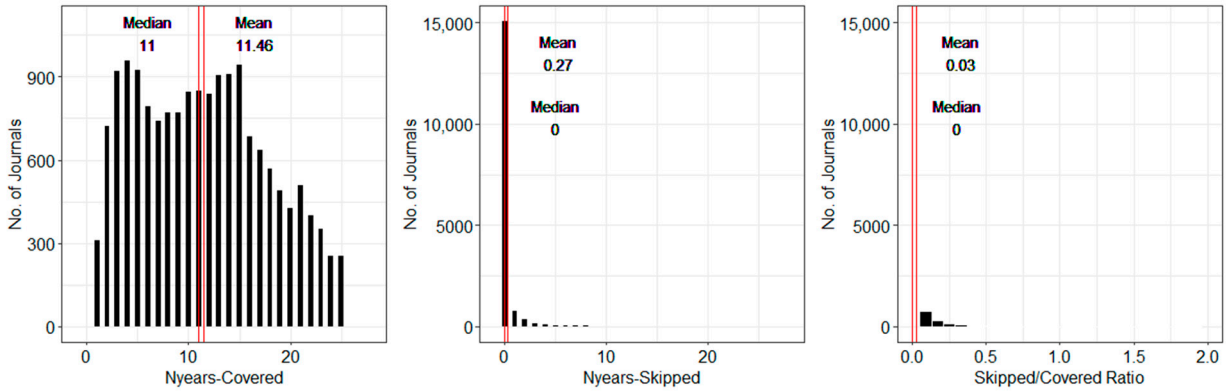

Figure 3. Frequency Distribution of Nyears-Covered, Nyears-Skipped, and Skipped/Covered Ratio.

4.3. Association between Coverage Duration Indicators and Other Journal Indicators

Figure 4 shows the results of linear regression and correlation analyses examining the relationship between the variables nyears-covered, nyears-skipped, and skipped/covered ratio across a range of journal indicators: total documents published in 2022 (Total Doc. 2022), h-index, and total citations received for two years (Cites—2 Year). The figure illustrates that, except for the h-index, there is generally a low or negligible correlation between the three variables (nyears-covered, nyears-skipped, and skipped/covered ratio). However, a moderate correlation is observed between nyears-covered and the h-index ($r = 0.41$), indicating that the number of years Scopus covers a journal is positively related to its overall impact. It is worth noting that the interpretation of correlation analysis results should be approached with caution due to the non-normal distribution of the nyears-skipped and skipped/covered ratios. The correlation analysis assumes a linear relationship between the variables and is most appropriate when both variables follow a normal distribution [22]. As these variables deviate from the normal distribution, the results of the correlation analysis may be influenced or less reliable.

4.4. Coverage Duration Indicators, Journal Types and Quartiles

Distinguishing between OA and non-OA journals is important for analyzing coverage duration indicators, providing clarity on accessibility and diverse publishing models that shape the dissemination of scholarly output. Table 1 shows the composition of journal types in the dataset, reflecting the landscape of OA and non-OA journals. In this study, journals categorized as OA in the SJR were considered OA journals, while those not categorized as OA were classified as non-OA journals, which include subscription-based journals and hybrid journals. Elsevier utilizes DOAJ and ROAD to determine OA journal status [23]. Non-OA journals account for the majority, comprising 58.7% of the total, with a count of 9841 journals. On the other hand, OA journals make up 41.3% of the dataset, totaling 6921 journals. Thus, there are approximately 1.42 times more non-OA journals than OA journals in the dataset.

Table 1. Composition of OA and Non-OA Journals in the Dataset.

OA Status	No. of Journals	Percentage
Non-OA	9841	58.7%
OA	6921	41.3%
Total	16,762	100%

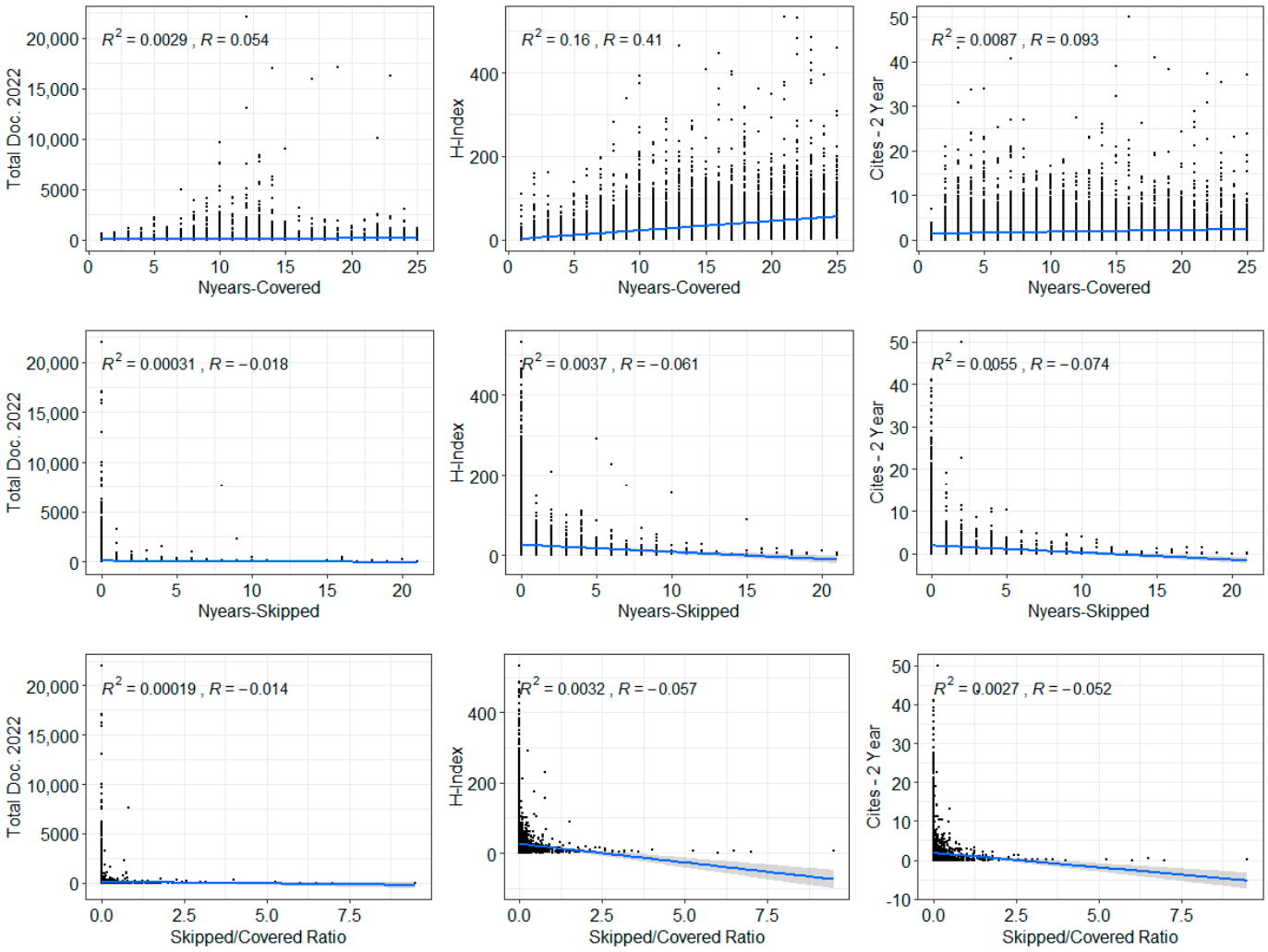

Figure 4. Scatterplots of Nyears-Covered, Nyears-Skipped, Skipped/Covered Ratio, and Various Journal Indicators.

Table 2 provides an overview of the mean coverage duration indicators and journal types across quartiles for both non-OA and OA journals. The results indicate that non-OA journals typically have a greater nyears-covered value compared to OA journals, which aligns with the history of the OA movement [24]. Because OA journals have a shorter history than non-OA journals, they can be expected to be indexed more recently in the SJR than non-OA journals.

Table 2. Coverage Duration Indicator Values of Non-OA and OA Journals Across Quartiles.

Indicators	OA Status	Q1	Q2	Q3	Q4	Mean
Nyears-covered	Non-OA	13.89	13.06	11.84	11.10	12.33
	OA	10.46	10.77	10.09	9.56	10.24
Nyears-skipped	Non-OA	0.16	0.25	0.36	0.52	0.33
	OA	0.13	0.16	0.17	0.27	0.19
Skipped/Covered ratio	Non-OA	0.01	0.02	0.04	0.06	0.03
	OA	0.01	0.02	0.02	0.03	0.02

We can also observe that as quartiles advance from Q1 to Q4, nyears-covered decreases for both types of journals. For non-OA journals, nyears-covered decreases from

13.89 in Q1 to 11.10 in Q4, while for OA journals, it declines from 10.46 in Q1 to 9.56 in Q4. In contrast, nyears-skipped increases as quartiles advance for both non-OA (0.16 to 0.52) and OA (0.13 to 0.27) journals. Similarly, the skipped/covered ratio also increases from Q1 to Q4 for both non-OA (0.01 to 0.06) and OA (0.01 to 0.03) journals. The mean values in this table reflect these results, indicating that non-OA journals generally have higher nyears-skipped values than OA journals. In addition, the mean skipped/covered ratio is higher for non-OA journals than for OA journals. These differences suggest the tendency for non-OA journals to have a greater number of skipped years and higher skipped/covered ratios compared to OA journals. These results are unexpected because, contrary to the general assumption based on the history of the OA movement, non-OA journals, which generally have a longer history, exhibit higher values in nyears-skipped and skipped/covered ratios compared to OA journals.

A two-way ANOVA was conducted to examine the main effects of the independent variables OA Status (OA and Non-OA) and Quartile on the dependent variables nyears-covered, nyears-skipped, and skipped/covered ratio (Table 3). For nyears-covered, both main effects were statistically significant, with OA Status ($F(1, 16{,}617) = 521.6$, $p < 0.0001$) and Quartile ($F(1, 16{,}617) = 278.4$, $p < 0.0001$) showing substantial influence. Similarly, for nyears-skipped, significant main effects were found for both OA Status ($F(1, 16{,}617) = 62.86$, $p < 0.0001$) and Quartile ($F(1, 16{,}617) = 115.73$, $p < 0.0001$). For the skipped/covered ratio, significant main effects were observed for OA Status ($F(1, 16{,}617) = 33.92$, $p < 0.0001$) and Quartile ($F(1, 16{,}617) = 77.05$, $p < 0.0001$). The exclusion of 142 observations due to missing data is noted. The findings suggest that the choice of OA status (OA or non-OA) and the quartile placement significantly impact the observed patterns in nyears-covered, nyears-skipped, and skipped/covered ratios.

Table 3. Two-Way ANOVA Results for OA and Non-OA Journal Types Across Quartiles.

Dependent Variable	Independent Variables	Df	Sum Sq	Mean Sq	F-Value	pr (>F)
Nyears-Covered	OA Status	1	19,747	19,747	521.6	<0.0001
	Quartile	1	10,540	10,540	278.4	<0.0001
Nyears-Skipped	OA Status	1	87	86.75	62.86	<0.0001
	Quartile	1	160	159.72	115.73	<0.0001
Skipped/Covered Ratio	OA Status	1	1.0	1.0456	33.92	<0.0001
	Quartile	1	2.4	0.0308	77.05	<0.0001

4.5. Coverage Duration Indicators and Subject Categories

Analyzing the variability between subject categories in terms of coverage duration indicators is valuable for understanding disciplinary differences in journal coverage in Scopus. Table 4 displays the mean coverage duration across subject categories. In this study, we employed fractional counting methods [25,26] to calculate coverage duration indicators across Scopus's 26 major subject categories and the 'Multidisciplinary' subject category, distinguished by its encompassing vague, interdisciplinary scope. Fractional counting is preferred over full counting due to the potential assignment of multiple subject categories to a single journal. Consequently, each subject area was credited with a fraction based on the duration covered, regardless of its disciplinary focus.

In terms of nyears-covered, journals published in 'Pharmacology, Toxicology and Pharmaceutics' exhibit the highest value of 13.06, which suggests that journals in this subject area have been consistently indexed and covered for a longer duration. In contrast, journals published in 'Social Sciences' (10.32) and 'Arts and Humanities' (10.42) show relatively low nyears-covered values, implying that journals published in this subject category have a relatively low coverage history. Nyears-skipped and the skipped/covered ratio are relatively high in 'Arts and Humanities' (0.52 and 0.06, respectively) and 'Nursing' (0.49

and 0.05, respectively). This suggests that journals in this subject category are more susceptible to being delisted from Scopus, indicating potential difficulties in maintaining their indexing status compared to journals in other subject categories. In contrast, 'Veterinary' has the lowest nyears-skipped (0.09) and the lowest skipped/covered ratio (0.01). This implies that journals indexed under this subject category are less likely to face delisting and are in a better position to maintain their indexing status compared to journals in other subject categories. However, it should be noted that the average mean of coverage duration in subject areas may not fully capture the complexity of individual journals' coverage patterns in a subject area.

Table 4. Mean Coverage Duration Across Subject Categories.

Subject Categories	NYears-Covered	Nyears-Skipped	Skipped/Covered Ratio
Agricultural and Biological Sciences	11.84	0.25	0.02
Arts and Humanities	10.42	0.52	0.06
Biochemistry, Genetics and Molecular Biology	12.70	0.20	0.02
Business, Management and Accounting	12.34	0.29	0.03
Chemical Engineering	11.05	0.13	0.01
Chemistry	11.55	0.16	0.02
Computer Science	11.64	0.21	0.03
Decision Sciences	11.45	0.18	0.01
Dentistry	11.78	0.13	0.02
Earth and Planetary Sciences	11.78	0.23	0.02
Economics, Econometrics and Finance	11.95	0.29	0.03
Energy	10.72	0.30	0.03
Engineering	12.15	0.23	0.03
Environmental Science	10.43	0.18	0.02
Health Professions	10.61	0.20	0.02
Immunology and Microbiology	12.09	0.10	0.01
Materials Science	11.48	0.17	0.02
Mathematics	11.71	0.17	0.02
Medicine	12.26	0.20	0.02
Multidisciplinary	10.92	0.15	0.01
Neuroscience	12.47	0.23	0.03
Nursing	12.21	0.49	0.05
Pharmacology, Toxicology and Pharmaceutics	13.06	0.26	0.02
Physics and Astronomy	12.63	0.18	0.02
Psychology	11.82	0.23	0.02
Social Sciences	10.32	0.31	0.04
Veterinary	11.71	0.09	0.01
Mean	11.67	0.23	0.02

The Kruskal–Wallis test was employed to examine statistical differences in coverage duration indicators among subject categories (see Table 5). The results indicated statistically significant differences for each variable: nyears-covered, $H(26) = 484.0$, $p = < 0.001$; nyears-skipped, $H(26) = 262.0$, $p < 0.001$; and nyears-covered ratio, $H(26) = 266.0$, $p < 0.001$. These findings suggest significant variations in the medians of the variables among the groups. Further post-hoc analyses may be warranted to identify specific group differences. In general, the significant variations in coverage duration indicators among subject categories suggest that journal coverage patterns in Scopus differ across research areas.

Table 5. Kruskal–Wallis Test Results of Coverage Duration Indicators.

Variable	N	Statistic	Df	*p*-Value
Nyears-covered	28,257	484	26	6.13×10^{-86}
Nyears-skipped	28,257	262	26	6.71×10^{-41}
Skipped/covered ratio	28,257	266	26	1.12×10^{-41}

5. Discussion

This study's empirical findings reveal intriguing patterns regarding skipped years in Scopus-indexed journal coverage. We found that only about 10% of Scopus-indexed journals have experienced occasional exclusion or gaps in coverage. Although journals covered in Scopus tend to maintain continuous coverage, this study showed that measuring coverage duration can be useful for understanding the sustained reliability of selected groups of journals, contributing to the overall robustness of the entire database. This assessment is pertinent not only for researchers and academic institutions relying on specific journals but also for understanding the broader dynamics and quality standards maintained at the database level.

In relation to journal metrics, nyears-covered increased with total documents published, h-index, and total citations, while nyears-skipped declined as these indicators increased. Thus, there was a positive relationship between nyears-covered and these indices, while nyears-skipped had a negative relationship. However, with the exception of the h-index, coverage duration indicators showed low associations with total documents published and total citations. Nyears-covered moderately correlated with the h-index, supporting the findings reported by Jokic et al. [14]. The association between nyears-covered and the h-index is generally positive, as journals with longer coverage periods have a greater potential to accumulate citations and publications over time. This suggests that the extent to which a journal is excluded from Scopus is not strongly related to the number of documents published and citations received by the journal.

One interesting finding of this study is that although non-OA journals have a longer coverage history, OA journals appear to possess a better ability to sustain continuous and consistent indexing, potentially due to their greater visibility. This finding raises questions about the factors contributing to the observed differences in indexing stability between OA and non-OA journals. Non-OA journals consistently exhibited greater nyears-covered values than OA journals, consistent with Jacso's [16] argument that core journals should maintain uninterrupted coverage to prevent overlooking vital research. In most subject categories, core journals have traditionally been non-OA journals. With regards to its quartiles, as quartiles decreased from Q1 to Q4, both journal types showed increasing trends in nyears-skipped and skipped/covered ratios. Furthermore, non-OA journals tended to have higher values for nyears-skipped and skipped/covered ratios than OA journals.

As with subject categories, the duration of journal coverage in the subject categories of Scopus showed considerable variation in the stability of indexing. Disciplinary differences were evident, but the underlying reasons for these variations were difficult to explain and were not investigated in detail. Nonetheless, the coverage duration of journals across subject categories could have implications for the evaluation and ranking of journals within and across subject categories, as the use of coverage duration indicators can provide useful information in assessing indexed journals across subject categories. The study's findings reflect the diligent efforts undertaken by Scopus to regulate and maintain control over its content coverage, indicating the careful curation and management of the journals included in its database [27].

Regardless of the specific grouping of journals, when evaluating individual journals or a group of journals, it is essential to consider both nyears-covered and nyears-skipped. Relying solely on nyears-skipped may not provide sufficient information about the duration of a journal's inclusion in the database. While nyears-covered serves as the primary indicator of coverage duration, it is important to also consider nyears-skipped and the

skipped/covered ratios. Journals with a high proportion of nyears-covered and a low proportion of nyears-skipped are likely to be the most stable in terms of indexing. With these metrics, researchers can gain a more detailed understanding of the historical indexing patterns of a journal, facilitating informed decision-making about its inclusion and exclusion over time.

As with any research study, there are limitations to this study that have implications for future research. First, the proposed methodology faces challenges due to the lack of downloadable coverage information. Incomplete coverage information hampers the accuracy of bibliometric studies, as many databases lack historical coverage information. Second, this study's exclusive focus on 2022 data limits the analysis to journals currently included for that year and excludes consideration of journals that have been delisted. Thirdly, factors such as name changes, mergers, acquisitions, or changes in publishing practices could contribute to a journal being removed from the index. However, these factors were not examined in this study. Fourthly, the limitation of excluding approximately one-third of Scopus journals due to truncating coverage in 1996 poses a challenge to the generalizability of the results. It is important to note that gaps in older journals, predating the launch of a database, differ fundamentally, as databases cannot apply the same principle of evaluating journals that existed before the launch of a database. Lastly, this study used journals listed in the SJR portal as a proxy for journals indexed by Scopus. Since there may be slight discrepancies between the two databases due to lag time, this could affect the study's results.

Despite these limitations, coverage duration indicators appear to effectively capture the stability of journal indexing by measuring the historical inclusion and exclusion from the database since initial indexing. Longer periods of uninterrupted indexing without gaps in coverage indicate higher levels of trust and reputation among researchers. The positive association between coverage duration indicators and quartiles, as well as the h-index, suggests their potential significance in evaluating journals. As this study has demonstrated, the long-term sustainability of indexing subsets of indexed journals can be better understood when coverage duration indicators accompany other bibliometric measures.

6. Conclusions and Future Study Recommendations

This study demonstrated the importance of coverage duration indicators in evaluating journal stability within Scopus, revealing Scopus's efforts in content coverage regulation. The findings underscore the importance of considering both inclusion and exclusion patterns over time when evaluating the historical indexing behavior of journals. Obtaining accurate historical coverage details from database providers, such as the SJR, is a crucial initial step in examining coverage gaps. Journals with extended, uninterrupted indexing periods may be perceived as more reliable and consistent sources of scholarly content, impacting decisions by researchers, academic institutions, publishing houses, librarians, policy-making bodies, and journal-ranking organizations. Beyond the context of Scopus-indexed journals, the coverage duration indicators proposed in this study can be applied to evaluate the stability of periodicals in a database. Thus, these indicators should be useful for understanding the broader dynamics and quality standards maintained in any type of database that periodically maintains its indexed content.

Future studies should examine the causes of gaps in coverage in more detail. First, possible reasons, such as non-compliance with database standards or erroneous deletions, potentially stemming from inadequate communication with databases like Scopus, should be examined in future studies. Secondly, future studies should consider diverse databases, as valuable insights could be gained by scrutinizing and comparing coverage gaps across different databases. However, this could be challenging due to difficulties in obtaining historical indexing information in databases. Thirdly, future studies can be conducted to examine the distribution across journal types (i.e., OA and non-OA) and subject categories in more detail to investigate why journals indexed in one category have a lower skipped/covered ratio than others. Finally, an interesting avenue for future research lies

in investigating coverage duration in relation to the size of publishers. Given the significant influence of publisher size on journal indexing, a comprehensive study that examines coverage gaps involving the age of journals based on their launch date, the time acquired by publishers, and the size of publishers could provide essential insights into the intricacies of the evolving publishing landscape.

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Data Availability Statement: Data can be downloaded from the publicly available SJR portal: https://www.scimagojr.com/ (accessed on 1 December 2023).

Conflicts of Interest: The author has no competing interests to declare that are relevant to the content of this article.

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