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Journal analysis

Research Trends Editorial Board

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The value of bibliometric measures



Journal analysis

Journal evaluation is becoming increasingly important across academia, from scientists who have been invited to participate in the editorial processes of a journal to librarians who are considering which journals to make available to their users.

Many factors play a part in the evaluation of a journal, and these will be different for various groups of users. At the same time, evaluation usually needs to be performed in the context of other journals in a similar field. In the past, journal evaluation took a lot of time and effort. However, recognizing the growing demand for user-friendly evaluation tools, Scopus has developed the **Scopus Journal Analyzer**, which displays transparent, objective results for quick and intuitive comparison of up to 10 journals. In addition, the data are updated every two months, which means users have access to the most up-to-date information available.

A clearer picture

To evaluate a journal thoroughly, it is important to look at how it has been performing over time. It is also important to compare it with similar journals to understand the results in context.

To take an example, *Presse Médicale* is a multidisciplinary French medical review journal that commenced publication in 1893 under the title *La Presse Médicale* and continued as *Nouvelle Presse Médicale*. It receives most citations from itself, and from the other French review journals *Revue de Médecine Interne*, *Revue du Praticien* and *Revue de Geriatrie*.

It is relatively simple to compare the publishing trends of these four journals using the Scopus Journal Analyzer. For instance, Figure 1 shows that the annual output of three of the journals remained roughly steady over the period 1996–2007, with only *Presse Médicale* reducing the amount of content that it publishes. The low point at the right-hand side of this and the other graphs reflects the fact that the data for 2008 are as yet incomplete.

Despite this drop in output, *Presse Médicale* first increased and then maintained the level of citations that it attracts; *Revue de Médecine Interne* shows a similar increase in total annual citations despite its static content output (see Figure 2).

We can also combine these two metrics in the Trend Line, which shows trends in average journal citation per article (see Figure 3). The Trend Line is calculated by dividing the total citations received in a calendar year by the total documents published in that same year. The citations are counted regardless of when the item being cited was published.

Figure 3 clearly shows that *Presse Médicale* and *Revue de Médecine Interne* are attracting more citations while *Revue du Praticien* and *Revue de Geriatrie* have maintained a steady rate.

It is interesting to speak to the publishing editor of *Presse Médicale* to find out if any editorial changes took place during the period shown that might have impacted the citation accrual. “*Presse Médicale* used to be a weekly, then a fortnightly publication. Since 2006, it’s been monthly, so naturally the number of articles decreased,” says Olivier Chabot. “We also have a very exacting editorial board and the rejection rate has increased over the last four years. We now have a rejection rate of 55% for papers and 80% for clinical cases. The quality of our papers could explain why our citation rate has remained steady, even though the quantity has decreased. For the last two years, we have published more papers in English. Perhaps these articles are more highly cited. We also increased our self-citation.”

To take another example, *Nuclear Physics B*, which commenced publishing in 1967, focuses on original research in high-energy physics and quantum field theory. It is read by particle physicists, field theoreticians and statistical and mathematical physicists. Most of its citations come from *Physical Review D*, *Journal of High Energy Physics*, *Nuclear Physics B* and *Physics Letters B*.

Again, these journals can be compared in the Scopus Journal Analyzer. *Physical Review D* is registering an annual increase in citations (see Figure 4). *Nuclear Physics B* has the highest average journal citation per article, 77.15 in 2007 (see Trend Line in Table 1). This upward trend can also be seen for *Physics Letters B* (see Figure 5).

“*Nuclear Physics B* has consistently maintained its high standards despite the reduction in the number of papers being published in particle physics,” says Publishing Director David Clark of his journal.

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Figure 1 – The annual output of the four journals under review remained relatively stable over the period 1996–2007, with only *Presse Médicale* reducing the amount of content that it publishes.

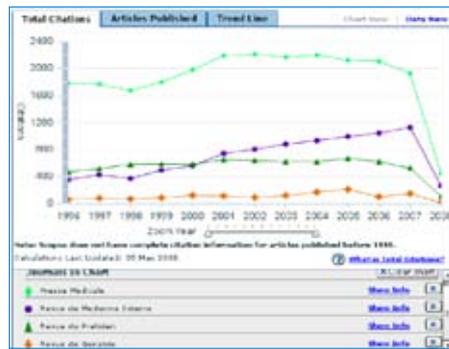


Figure 2 – Despite reducing its output, *Presse Médicale* has first increased and then maintained the level of citations that it attracts. *Revue de Médecine Interne* has also experienced a steady increase in citations.

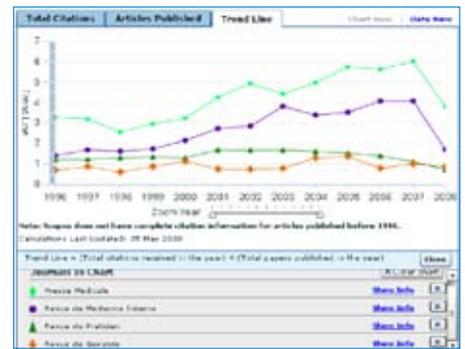


Figure 3 – The Trend Line, which shows average journal citation per article, clearly reveals that *Presse Médicale* and *Revue de Médecine Interne* are attracting more citations while *Revue du Praticien* and *Revue de Geriatrie* have maintained a steady rate.

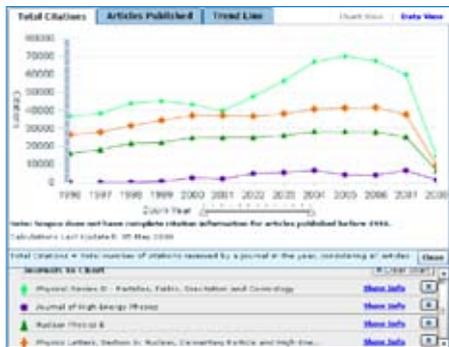


Figure 4 – Of the journals under review, only *Physical Review D* is registering an annual increase in citations.

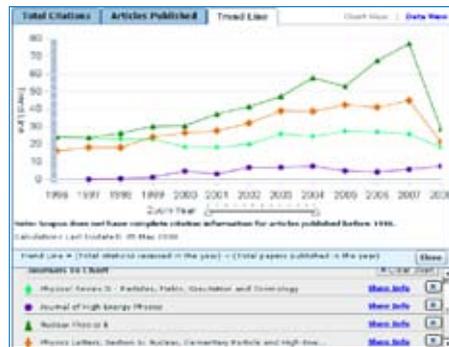


Figure 5 – *Physics Letters B* has registered a steady increase in average journal citation per article.

Journal	Total Citations	Articles Published	Trend Line	Year
Nuclear Physics B	22724	523	43.25	1996
Nuclear Physics B	21943	524	41.87	1997
Nuclear Physics B	24843	574	43.27	1998
Nuclear Physics B	24964	678	36.82	1999
Nuclear Physics B	28369	640	44.32	2000
Nuclear Physics B	34577	551	62.75	2001
Nuclear Physics B	38000	480	79.16	2002
Nuclear Physics B	38256	510	75.01	2003
Nuclear Physics B	38481	417	92.28	2004
Nuclear Physics B	39200	520	75.38	2005

Table 1 – *Nuclear Physics B* has the highest average journal citation per article: 77.15 in 2007.