

# A Comparative Citation Analysis of Web of Science, Scopus, and Google Scholar (article review)

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## References

Levine-Clark, M., & Gil, E. L. (2009).

A comparative citation analysis of web of science, scopus, and google scholar. Journal of Journal of Business and Finance Librarianship, 14(1), 32-46.

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## Background

There are numerous articles comparing the big 3 cross-disciplinary databases, namely Web of Science, Scopus and Google scholar. The article above is yet another one written on the same topic. It dutifully

covers old ground by explaining that ISI's Web of Science is the oldest of the three, with the most depth

(it has the oldest archives) but the least breadth (because it indexes only the most prestigious journals).

Google scholar on the other end of the spectrum is the broadest of the three but mixes in results from

unofficial sources. Scopus lies somewhere in between. It dutifully explains reasons for why citation counts for an article tend to increase as you move from Web of Science to Scopus to Google Scholar. [Bauer and Bakalbasi \(2005\)](#)'s often mentioned recommendation that one combine either Scopus or Web of Science with Google Scholar is mentioned again.

## Methodology

Somewhat uniquely the sample articles used for this study comes from business/economics journal set.

They use ISI as a base to select the top 5 ISI and bottom 5 ISI journals based on Impact factors.

In addition they randomly select another 5 Journals not on ISI from Scopus.

For each of 15 journals, they do the following.

1. Use [Sciencedirect's Top 25 hottest article feature](#) to select 25 "hottest articles"
2. Any other articles in the same journal issue as the selected 25 "hottest articles" are also selected and are termed "unranked articles"
3. The total number of citations are then searched for in Web of Science , Scopus and Google scholar.

## **Major findings**

The results are hardly surprising really. As expected

1. Citations increase in this order, Web of Science, Scopus, Google scholar
2. Articles from top 5 ISI Journals have higher average citation than those from bottom 5 ISI Journals in all 3 databases.
3. “Hottest articles” have more average citations than “unranked articles ” across all 3 databases, showing that increased usage leads to more citations
4. For Scopus and Web of science, Top 5 ISI Journals are compared with bottom 5 ISI Journals and Non-ISI Journals. Somewhat surprising for both, while the highest average citations came from the Top 5 ISI Journals as expected, unranked ISI Journals had higher average citations than the bottom 5 ISI journals.

For google scholar, they are found a strong correlation between the number of citations each article got and the number of hits/links to the article