

# Mastering metrics

A Taylor & Francis guide



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## FOR RESEARCHERS...

Metrics can help you to choose which journal to submit your work to, and assess the ongoing impact of an individual piece of research (including your own).

## FOR JOURNAL EDITORS...

- Metrics can help you assess your journal's standing in the community, raise your journal's profile, and potentially attract quality submissions.

## FOR LIBRARIANS...

- Metrics can help you to select journals for your institution, and analyze their usage and impact.
- They can also help you assess the impact of research published by those in your institution.

### J Journal Metrics

### A Article Metrics

#### J IMPACT FACTOR

Impact Factors are the most commonly used metric to assess a journal. Different subject areas have varying citation patterns which are reflected in the calculations. Released annually based on Web of Science Journal Citation Reports®, only journals in the Science Citation Index Expanded (SCIE) and Social Sciences Citation Index (SSCI) can have an Impact Factor.

##### How it's calculated:

$$\frac{\text{Number of citations in one year to content published in the previous two years}}{\text{Number of articles and reviews published within the previous two years}}$$

#### J 5-YEAR IMPACT FACTOR

5-year Impact Factors attempt to reflect the longevity of research, and are more stable year-on-year for smaller titles as there are a larger number of articles and citations included. These are useful for subject areas where it takes longer for work to be cited.

##### How it's calculated:

$$\frac{\text{Number of citations in one year to content published in the previous five years}}{\text{Number of articles and reviews published within the previous five years}}$$

#### J IMMEDIACY INDEX

The Immediacy Index can focus on how quickly content is cited rather than its long-term impact. The calculation can vary between subject areas and journal type.

##### How it's calculated:

$$\frac{\text{Number of citations to articles published in a given year}}{\text{Number of articles published in the same year}}$$

#### J CITED HALF-LIFE

Cited Half-life is a measurement of the "archivability" or longevity of research. It reflects how long research continues to be referred to and cited after it has been published.

##### How it's calculated:

$$\text{Number of years after which 50% of the lifetime journal citations in a year have been received}$$

#### J EIGENFACTOR

The Eigenfactor is based on the idea that not all citations are created equal. It measures the influence of a journal within the relevant literature over 5 years. A citation from a highly-cited journal is worth more than one that receives few citations.

##### How it's calculated:

$$\frac{\text{Number of citations in one year to content published in the previous two years}}{\text{Number of articles published within the previous two years}}$$

#### J ARTICLE INFLUENCE SCORE

The Article Influence Score measures the average influence per article of the papers published in a journal. It is calculated by dividing the Eigenfactor by the number of articles published in the journal. A score greater than 1.00 means that each article has an above average influence.

##### How it's calculated:

$$\text{The normalized Eigenfactor per article}$$

#### J CITESCORE

CiteScore aims to capture the optimum citation period for most subject areas. It is a ratio of citations to content published, and considers all content.

##### How it's calculated:

$$\frac{\text{Citations in a given year to articles published in the previous three years}}{\text{Number of articles published within the previous three years}}$$

#### J SNIP

#### Source Normalized Impact Per Paper

SNIP is published twice a year and looks at a 3-year period. It attempts to correct subject-specific characteristics so it is easier to make cross-discipline comparisons between journals. It measures citations received relative to citations expected for the subject field.

##### How it's calculated:

$$\frac{\text{Journal citation count per paper}}{\text{Citation potential in the field}}$$

#### J SJR

#### Scimago Journal Rank

Like the Eigenfactor, the SJR aims to capture the effect the subject field, quality, and reputation of a journal has on a citation. It weights a citation by prestige and aims to measure the prestige one journal gives to another.

##### How it's calculated:

$$\frac{\text{Average number of weighted citations in a given year}}{\text{Number of articles published in the previous three years}}$$

#### J A H-INDEX

The h-index attempts to measure the productivity of a researcher and the citation impact of their publications. It varies by field and depends on which data source is used to calculate the value. If you have a h-index of 10 you must have published at least 10 papers that have each been cited 10 times or more.

##### How it's calculated:

$$\text{Number of articles published which have received the same number of citations}$$

#### A ALTMETRIC ATTENTION SCORE

Altmetric Attention Scores are based on the number of mentions an article receives from various source types. Within each source type, each mention is weighted differently. So, article mentions in an international newspaper have a different weighting to someone tweeting about the same piece of research.

##### How it's calculated:

Gathers data collected around research content that isn't usage or citation data, such as mentions on social media, in traditional media, on blogs, in policy documents, and online reference managers.

#### A AUTHOR BIBLIOGRAPHICS

The simplest author level metric is the number of papers published by an author. The number of citations the author has received is the next step up. Such author-level metrics allow a direct analysis of a researchers output and how well cited it is. Web of Science, Scopus, and Google Scholar all allow searches for individual authors.



Find out more: [bit.ly/TF-Mastering-Metrics](http://bit.ly/TF-Mastering-Metrics)