

Bibliometric measures Table

Metric	Description	Notes	Source
<b>Journal Impact Factor (IF)</b>	The IF is calculated by adding up the number of citations in the current JCR year to articles published in a given journal during the last two JCR years, and then dividing this figure by the number of articles published in the given journal in the last two JCR years. An IF of 2 means that, <i>on average</i> , papers published in Journal X during JCR years 2007 and 2008 have been cited two times in the 2009 JCR year. The higher the IF, the more 'impact' the journal has.	This favours subject areas where citations peak soon. For a longer term view, the 5-Year Impact Factor is available.	JCR
<b>Eigenfactor</b>	Similar to the 5-Year IF, the Eigenfactor score is calculated by adding up the number of articles published in a given journal during the last five JCR years, and then dividing this figure by the total number of citations those articles have received during the current JCR year from all journals included in JCR. It differs in the weighting applied to the score: citations from journals with a high IF have a greater impact on the Eigenfactor Score.	The weighting applied to the score is comparable to Google's Pagerank algorithm.	JCR; E.org
<b>Article Influence (AI)</b>	The <i>Article Influence</i> determines the average influence of a journal's articles over the first five years after publication. It is calculated by dividing a journal's <i>Eigenfactor Score</i> by the number of articles in the journal, normalized as a fraction of all articles in all publications. This measure is roughly analogous to the 5-Year Journal Impact Factor in that it is a ratio of a journal's citation influence to the size of the journal's article contribution over a period of five years. AI scores are normalized so that the mean article in the entire JCR database has an article influence of 1.00. A score greater than 1.00 indicates that each article in the journal has above-average influence. A score less than 1.00 indicates that each article in the journal has below-average influence. Source: JCR ( <a href="http://admin-apps.isiknowledge.com.ezproxy.liv.ac.uk/JCR/help/h_eigenfact.htm">http://admin-apps.isiknowledge.com.ezproxy.liv.ac.uk/JCR/help/h_eigenfact.htm</a> )		JCR
<b>Journal Immediacy Index (JII)</b>	The JII is the <i>average</i> number of times articles from a given journal are cited by other journals during the <i>same</i> JCR year. It can be used to gauge how topical the research is in that journal. For example: Citations to articles published in journal X in 2009 = 140; Number of articles published in journal X in 2009 = 78; JII figure is 140 divided by 78 = 1.795	Can be used to gauge how topical the research is in a journal	JCR
<b>SCImago Journal Rank (SJR)</b>	Like the Eigenfactor, the SJR accounts for the prestige of a journal. Papers published in a highly cited journal are accorded greater weight than those published in a journal that receives fewer citations <i>in the same field</i> . Additionally, SJR normalizes for differences in citation behaviour between subject fields.	Weighting aids comparison of journals from different subject disciplines.	Scopus
<b>SNIP (Source Normalized Impact per Paper)</b>	SNIP takes account of the variation in citation practice between subject disciplines: weighting is applied so that citations in subject areas where citing is less frequent are given a higher value, and vice versa. The weighting also accounts for the effects of 'immediacy' between fields - how quickly a paper is likely to have an impact.	Weighting aids comparison of papers from different subject disciplines.	Scopus
<b>h-index</b>	The h-index measures the impact of an author's publications over their whole career. It is also used to calculate the impact of a journal. The h-index figure is equal to the number of papers (N) published that have received at least N citations. For example, if an author has published 80 articles and 28 of those articles have been cited at least 28 times each (but 29 of their articles have not reached 29 or more citations each), their h-index figure is 28.		Scopus; GS; WoS; GSC

<b>g-index</b>	<p>The g-index also measures the impact of an author's publications over their whole career, and can be used to calculate the impact of a journal.</p> <p>Given a set of articles ranked in decreasing order of the number of citations received, the g-index is the (unique) largest number such that the top g articles received (together) at least <math>g^2</math> citations.</p> <p>For example, if an author's g-index is 25, their 25 (g) most highly-cited articles have received at least 625 (<math>g^2</math>) citations in total (but their top 26 (g) papers have received less than 676 (<math>g^2</math>)).</p>	A similar measure to the h-index, but gives greater emphasis to highly cited papers	GS
<b>e-index</b>	<p>The e-index is based on and complements the h-index in that it accounts for highly cited papers that aren't fully accounted for by the h-index. An h-index of 10 means that 10 papers have received <i>at least</i> 10 citations each – but some of these will have received many more: it's these 'excess' or 'surplus' citations that the e-index is calculated from. It is used to measure the output of an author or journal.</p> <p>The e-index is the square root of these surplus citations: if an author with an h-index of 10 has an e-index of 15, it means that those 10 articles accrued 325 citations: the h-index accounts for 100 citations (10 x 10); the square root of the remaining 225 citations that those 10 papers received is 15.</p>	The aim of the e-index is to differentiate between scientists with similar h-indices but different citation patterns.	GS
<b>Citation count</b>	The total number of citations to a journal, article or author in a given time period.		JCR; GS; WoS; GSC
<b>Age-weighted Citation Rate (AWCR)</b>	The AWCR measures the average number of citations to an author's work or a journal's output. The figure is adjusted to take account of the age of each paper: the number of citations to a paper is divided by the age of that paper	This will allow recent, and at present less-cited papers, contribute to the metric.	GS
<b>i10-index</b>	The i10-index is the number of publications with at least 10 citations. The first figure is based on all papers published by an author; the second figure has the "recent" version of this metric which is the number of publications that have received at least 10 new citations in the last 5 years		GSC

Key: JCR = Journal Citation Reports; WoS = Web of Science; GS = Google Scholar (via Publish or Perish <http://www.harzing.com/pop.htm>) ; GSC = Google Scholar Citations; e.org = [www.eigenfactor.org](http://www.eigenfactor.org)