

Normalized journal impact

Designation	Normalized journal impact
Denotation	\bar{c}_f
Description	<p>Equal to an item oriented field normalized citation score for articles from only one journal.</p> <p>This indicator corresponds to the relative number of citations to publications in one specific journal, compared to the world average of citations to publications of the same document type, age and subject area.</p> <p>The indicator is stated as a decimal number that shows the relation of the number of citations to the world average. As an example, 0.9 means that publications in this journal are cited 10% below average and 1.2 that they are cited 20% above average.</p>
Calculation	<p>The number of citations to each of the journal's publications is normalized by dividing it with the world average of citations to publications of the same document type, publication year and subject area, which is called the field citation score (μ_f). If an article is classified as belonging to several subject areas, the mean value of the field citation scores is used.</p> <p>The indicator is the mean value of all the normalized citation counts for publications in this journal.</p>
Formula	$\bar{c}_f = \frac{1}{P} \sum_{i=1}^P \frac{c_i}{[\bar{\mu}_f]_i}$ <p>c_i = number of citations to publication i</p> <p>$[\bar{\mu}_f]_i$ = the average value of citations to publications of the same type, published the same year in the same research area as article i</p> <p>P = the number of publications in the journal during the selected time period</p>
Example	<p>In the year 2002 Journal J which belongs to research area Y and Z published three articles. The normalized journal impact is calculated in 2005 since most research areas reach their citation peak three years after publication.</p> <ul style="list-style-type: none"> • Original article A which has received 9 citations. • Review B which has received 21 citations. • Original article C which has received 4 citations. <p>The field citation scores (μ_f) for corresponding articles are:</p> <ul style="list-style-type: none"> • Original articles published in 2002 in research area Y= 2.6 citations • Original articles published in 2002 in research area Z= 5.2 citations $\mu_f = (2.6 + 5.2) / 2 = 7.8$ <ul style="list-style-type: none"> • Review articles published in 2002 in research area Y = 11.7 citations • Review articles published in 2002 in research area Z = 26.3 citations $\mu_f = (11.7 + 26.3) / 2 = 19.0$

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Example	<p>The field normalized citation score for each article is:</p> <ul style="list-style-type: none"> • A: $9/7.8 = 1.2$ • B: $21/19 = 1.1$ • C: $4/7.8 = 0.5$ <p>The average of the normalized citation scores is: $(1.2+1.1+0.5) / 3 = 0.9$</p> <p>The 2002 normalized journal impact for Journal J calculated in 2005 is 0.9 which means that publications from 2002 published in this journal are cited 10% below average.</p> <p><i>[Note that for reasons of clarity the number of publications in this example is much lower than the minimum value recommended for a bibliometric analysis.]</i></p>
Data Requirements	Requires data from a comprehensive citation database such as the Thomson citation indices and calculation of field normalized citation scores for normalization of citation values.
Advantages	
Disadvantages	
KI usage	
Reference	