JOURNAL IMPACT FACTOR

3-year calculation window (2014, 2015, and 2016)
DISCLAIMER

• The information herein applies to the Journal Impact Factor calculation for 2016, as published in the 2017 *Journal Citation Reports (JCR)*.

• Clarivate Analytics, formerly the IP & Science business of Thomson Reuters, revisits the requirements for the Impact Factor calculation annually.

• Publishers can contact the Clarivate Publisher Relations team with questions: ts.prsupport@tr.com
DEFINITION: JOURNAL IMPACT FACTOR

• Impact Factor is a journal-level metric; it is the average number of times a journal’s articles – specifically, those published in a 2-year period – were cited in 2016.

• Impact Factors are calculated for journals selected for and indexed in the Science Citation Index Expanded (SCIE) or the Social Sciences Citation Index (SSCI).

• Impact Factors are published annually in the Journal Citation Reports (JCR)
The Impact Factor is calculated by dividing the number of citations in the JCR year (the **numerator**) by the total number of citable items published in the 2 previous years (the **denominator**).

An Impact Factor of 1.0 means that, *on average*, articles published 1 or 2 years ago were cited one time in 2016.

<table>
<thead>
<tr>
<th><strong>NUMERATOR</strong></th>
<th>The Number of Citations Made to the Journal in 2016 to Content Published in the Previous 2 Years (2014, 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DENOMINATOR</strong></td>
<td>The Number of Citable Items Published During the Previous 2 Years (2014, 2015)</td>
</tr>
</tbody>
</table>

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**IMPACT FACTOR CALCULATION**

4
2017 JCR (2016 IMPACT FACTOR)

Citations

Source paper – published in 2016

Cited reference – published in 2014 or 2015

2016 Impact Factor = \frac{2016 \text{ citations to 2014 and 2015 content}}{\text{Total # citable items published in 2014 and 2015}}
WHAT’S IN THE NUMERATOR?

- Citations are drawn from these indexes in Web of Science:
  - Science Citation Index Expanded (SCIE)
  - Social Sciences Citation Index (SSCI)
  - Arts & Humanities Citation Index (AHCI)
  - Emerging Sources Citation Index (ESCI)
  - The Science edition of the Conference Proceedings Citation Index (CPCI)
  - The Social Science and Humanities edition of the CPCI

- The following are not in the numerator:
  - Citations to articles, books, book chapters, or similar items indexed in other Web of Science datasets.
WHAT’S IN THE DENOMINATOR?

COUNTED:

• Citable Items
  – Original research articles
  – Review articles
  – Proceedings papers
  – Technical notes
  – Supplements: full articles will count

NOT COUNTED:

• Editorials
• Discussions
• Meeting abstracts
• Book reviews
• News items
• Letters or Commentaries, unless they function as “articles,” such as the letters in Nature.
WHAT IS A “CITABLE ITEM”?

• Characteristics of a citable item include:
  – Usually an article, proceeding, or review, but not limited to these categories
  – Descriptive article title
  – Named author with address and funding information
  – Abstract
  – Article length
  – Cited references
  – Data content
# TITLE CHANGES AND IMPACT FACTOR

How do title changes affect Impact Factor?

| Year 1          | • The new title is listed with an immediacy index: citations in the JCR year (2016) to content published in the JCR year (2016).  
|                | • The old title is listed with normal Impact Factor. |
| Year 2          | • The JCR lists separate Impact Factors for the new and the old titles. |
| Year 3          | • The old title is no longer listed.  
|                | • The new title appears with a normal Impact Factor. |
SUPPLEMENTS AND IMPACT FACTOR

How are supplements and special issues handled?

- Citable items from these publications are counted in the denominator.

- Ensure that Clarivate is aware of these titles, especially if they fall outside the stated frequency of the journal.
• My journal added a new section over the past 2 years. Is this change captured in the JCR?

  – Adding new sections or changing existing sections in a currently indexed journal can affect the Impact Factor.

  – Alert Publisher Relations to such changes: ts.prsupport@tr.com
TITLE VARIANTS AND IMPACT FACTOR

• Authors cite journals inconsistently. Is the JCR still capturing the citations?

  – Yes. Title variants are unified by the JCR team.
  
  – A citation **must** include the journal title/variant and year to be calculated for the Impact Factor.

  – Publishers are encouraged to provide clear instructions to authors on how to cite the journal, especially for “online first” or “publish ahead of print” articles.
JCR
JOURNAL
SUPPRESSION
JCR JOURNAL SUPPRESSION

• Increasingly rare but still enforced

• Action primarily taken in response to excessive self citation and citation stacking

• Suppression is not de-selection; journals can remain indexed in Web of Science
Journal Self-Citation
Suppression of individual journals

What the suppressed Journal metrics would look like

- Data considered:
  - Total citations (TC)
  - Journal Impact Factor (JIF)
  - Rank in category
  - % of journal self-citations in Journal Impact Factor numerator
  - Proportional increase in Journal Impact Factor with/without journal self-citations
  - Effect of journal self-citations on rank in category by Journal Impact Factor

- Journals in bottom 10% ranking by TC and/or by JIF are not suppressed

- Suppressed journals represent extreme outliers in citation behavior

- Science Edition and Social Sciences Edition are analyzed separately

- Journals are suppressed for one year, and re-evaluated with the next year’s data.

<table>
<thead>
<tr>
<th>Total Cites</th>
<th>2790</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citations to Years Used in Impact Factor Calculation</td>
<td>1619</td>
</tr>
<tr>
<td>Impact Factor</td>
<td>10.722</td>
</tr>
<tr>
<td>Self Cites</td>
<td>1717 (61% of 2790)</td>
</tr>
<tr>
<td>Self Cites to Years Used in Impact Factor Calculation</td>
<td>1308 (80% of 1619)</td>
</tr>
<tr>
<td>Impact Factor without Self Cites</td>
<td>2.060</td>
</tr>
</tbody>
</table>
Citation Stacking
Donor and Recipient journal pair suppression

What the suppressed Journal metrics would look like

<table>
<thead>
<tr>
<th>Cited Journal Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>--------</td>
</tr>
<tr>
<td>1.263</td>
</tr>
<tr>
<td>0.410</td>
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<tr>
<td>0.193</td>
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<td>0.090</td>
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<tr>
<td>0.090</td>
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<tr>
<td>0.025</td>
</tr>
</tbody>
</table>

Article in Donor Journal with references color-coded by cited work – Web of Science Citation Map

- **Data considered:**
  - Donor as % of Recipient’s Total Citations
  - Donor as % of Recipient’s Journal Impact Factor numerator citations
  - Concentration of citations exchanged into Journal Impact Factor numerator
  - Identification of individual item(s) in Donor Journal with near-exclusive reference to Recipient Journal(s)

- **Journals in bottom 10% ranking by TC and/or by Journal Impact Factor, are not suppressed**

New titles, where citation activity is naturally concentrated, are not suppressed

Suppressed journals represent extreme outliers in citation behavior

Science Edition and Social Sciences edition are analyzed separately

Donor and Recipient journals are suppressed for one year, and re-evaluated with the next year’s data.
FURTHER READING


Questions? Contact Publisher Relations

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