#### **Books**

The evaluation of the impact of scientific publications is usually based on how much they are cited in other publications. The evaluation of citation impact based on citations is well suited to fields where journals articles are the main form of publication. This is most often the case in the natural sciences. In humanities and social sciences, on the other hand, research findings are often published in book form. Quantitative citation analysis methods cannot be applied to books to the same extent as to journal articles. This is partly because the coverage of books in the databases is lower than that of articles.

## How are books analysed?

### Quantitative evaluation methods

The impact of books can be assessed by the number of citations received by them. Citation databases such Web of Science and Scopus index books both at the level of the book itself and at the level of the articles in edited books. More information on the indexing policies of the above databases can be found on their websites. Read more about the book indexing policy of the Web of Science database or the book indexing policy of the Scopus database.

However, the coverage of book citations in the above databases is not high, partly due to the fact that these databases tend to focus on material from the natural sciences, while books are published mainly in humanities and social sciences.

Books can also be searched in the Google Scholar, which includes books from the Google Books service. Citations received by books can also be found on the Dimensions service.

The impact of books can also be studied by looking at the visibility and attention they receive on social media and social networking sites: there are altmetric tools for this.

## Other tools for evaluating books

Citations and book reviews received by books can be retrieved from the Web of Science database and Google Scholar, as well as from the higher education institutions' own library databases.

Databases such as Google Books and Project Gutenberg that contain full-text books allow users to search the entire contents of a book, including the bibliography, which provides more versatility when it comes to retrieving citation data. In the case of publishers, it may be useful to look at a list of university presses, for example.

Various identifiers have been developed to acknowledge peer-reviewed publications. The GPRC label (Guaranteed Peer Reviewed Content) certifies that a book has been peer-reviewed according to international academic standards. The Federation of Finnish Learned Societies has developed its own label for peer-reviewed scholarly publications in Finland.

#### JUFO level of monographs and edited books

The Publication Forum lists around 3,700 national and international publishers. The classification aims to take into account the different publishing cultures and practices of the fields of science; for example, a significant proportion of publications in the humanities and social sciences are scientific articles in an edited book or monographs. As it has not been considered sensible for the Publication Forum to list and evaluate thousands of foreign book series, book publishers have been classified into different levels. Domestic scientific book series, on the other hand, are classified, and books published by Finnish publishers are classified primarily by their series.

The Publication Forum level of an edited book or monograph is always checked primarily with the publication's ISSN identifier. When checking the channel, it is worth noting that the book series may not yet have been evaluated on the Publication Forum. If the publication has not appeared in a book series with the ISSN identifier (in other words, the ISSN identifier does not exist), the level is checked based on the publisher. The spelling of the publisher's name can be checked on the title page of the publication. If the publication mentions both the name of the parent company and the name of the subordinate publishing house (imprint), the level is determined by the name of the imprint (e.g. Academic Press is an imprint of Elsevier). The publisher can also be searched for by the ISBN root of the book (the first three parts of the identifier, e.g. 978-951-222). If the ISBN identifier is not found in the database, or if the same ISBN root appears for more than one publishing house, the intended channel is determined by the publisher name.



# Responsible impact analysis of books

There are many challenges in evaluating the impact of books. Thus, the specific nature of books should be considered in the process of responsible evaluation.

The impact of scientific publications can often be measured by their citation impact. However, scientific books can often be very impactful, even outside of direct citations. Books are widely used in, for example, teaching and especially in theses. Books are also more widely read outside the academic world. Thus, books can have a significant impact long after they are no longer actively cited.

Evaluating the citation impact of books is a challenge. There is a limited number of scientific books in international databases. Where the coverage of databases is poor, individual citations can be very significant. Such variability can significantly distort the citation impact of books.

Google Scholar provides a more comprehensive coverage of books than the paid databases, but its indexing policy is not transparent. It is therefore not clear on what basis publications are indexed in Google Scholar. Google Scholar does not take the differences between fields of science and citation profiles into account, either. Google Scholar does provide a good overview of the citations received by books, but it is difficult to assess their significance.

Books often cover topics in a much broader way than individual articles. Books are also cited in a different way from articles, and citations to them often cover a complete subject area rather than individual observations. Although individual articles may cite a book in several parts of the article, these are counted as a single citation in the databases.

While articles usually have one clear final version (with the exception of articles in open access repositories such as arXiv, where there may be multiple and updating versions of articles), scientific books can have different editions and translations. Especially in the case of older books, scientific citations are usually to a more recent edition or translation. Evaluating the impact of these citations is not straightforward.