

Bibliometrics Indicators

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Definitions of Indicators

- Bibliometric indicators are quantitative measures used in bibliometrics.
- Indicators which compare the quantity, quality and visibility of research implemented by various individuals or institutions.
- Bibliometrics indicators are metrics used to gauge bibliometrics measures – focusing on quantity, quality and visibility of research.

Purpose of Indicators

- Bibliometrics indicators are used to quantify diverse aspects of production, use and impact of scientific publications.
- Bibliometrics indicators can be used to evaluate research excellence for individual researchers, research teams and institutions.
- Bibliometrics indicators can also be used to measure research contribution of countries.

Types of Indicators

- **Direct indicators** – these are indicators which are objective and are found directly on the documents (e.g. number of publications).
- **Derived indicators** – these are calculated based on an analysis of documents (e.g. citations).
- **Assigned indicators** – based on external assessments e.g. peer judgment, reputation.

Publication Count

- Total number of publications
- Number of indexed publications
- Number of publications in high impact journals
- Number of works per channel of publication
- Number of papers in local, regional or international channels of publication
- Publications per field

Publication Count...Ctd

- Relative activity index (unit's world share)
 - The analysed unit's world share of publications in a given field divided by the unit's world share of publications overall.
- Relative specialisation index (how active a unit is in a specified field)
 - A value of -1 indicates a completely idle research field and a value of 1 if all publications from the unit are in one field.

Citations

- Number of citations
- Number of citations per publication
- Normalised citation score (the relative number of citations to publications from a specific unit, compared to the world average)
- Hirsch (h) index
- Self citations
- Uncitedness

Citations...Ctd

- Average percentile (The average of shares of publications within the same types, ages and subject areas that have fewer citations than the analyzed publications.)
- Top 5% - shows the share of publications attributed to a unit that belong to the 5% most highly cited publications in the world from the same year, in the same subject and of the same document type.

Citations...Ctd

- Co-citation analysis
 - monitors the number of times (two) papers are cited together in single articles or patents in a particular field
- Co-word analysis
 - monitors the number of times key words are mentioned together in publications or patents in a particular field

Collaboration

- Co-authorship
- Number of authors per publication
- Number of affiliations per publication
- Number of countries per publication
- Number of fields (disciplines) per publication
- Co-delivery of programmes
- Collaborative research

Journal Factors

- Impact factor - the average number of citations a publication in a specific journal has received during the two years following its publication.
- Normalized journal impact
 - 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.