Indicators

In publication metrics, indicators are key figures, which aim to describe various characteristics of the subjects of the analysis, such as productivity, impact and internationality. Indicators are based on the number of publications, the numbers of citations and the publication level information.

Recommendations for responsible use of research metrics provide guidance on the use of indicators in evaluation. The key principle is that indicators can be used to support qualitative expert evaluation, but qualitative evaluation should be the primary method. Other national and international recommendations are along the same lines. Learn more about the recommendations in the chapter Responsible publication metrics.

From the recommendations, we can derive questions that allow us to consider the responsibility and appropriateness of the indicators we choose for each situation. For example:

- Do the selected indicators provide relevant information for the evaluation?
- Does the indicator take into account the differences between fields of science?
- Who might be discriminated against by the selected indicators?
- What unintended effects can the selected indicators have?
- Could the use of the indicator cause undesirable optimisation?
- Is the indicator based on relevant data for the subject of evaluation?
- Is the method of calculating the indicator transparent?
- Is the value of the indicator reported with appropriate accuracy?

Most indicators describe one characteristic of the subject of the analysis from a specific point of view. It is recommended to use several different indicators simultaneously in order to obtain a wide range of information on the subject of the analysis. In addition, the use of several different indicators compensates for the deficiencies of individual indicators. On the other hand, the choice of each indicator used must be justified in terms of the needs of the evaluation. The use of inappropriate indicators cannot be justified by the simultaneous use of several indicators. The analysis should also include all the relevant background information for the interpretation of the indicators.

THE CONTENT OF THE CHAPTER

- Productivity indicators
- Citation impact indicators
- Collaboration indicators
- Indicators for evaluating journals
- Indicators of open publishing