Scientific Metrics

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Agenda

Problem

The original purpose of scientific publishing was to enable the global sharing of scientific results, ideas, and discussions within the academic society for more effective scientific achievements.

influence of a publication is the most crucial criterion for many decisions
industrial and economic growth priorities,
allocation of funding resources,
education policies,
the hiring of personnel academics

Bibliographic Databases

bibliographic databases are the main sources of publication metadata and citation metrics

Web of Science and Scopus are the two main bibliographic databases

Scientific Metrics Types

Journal-level metrics are used to determine the impact a journal has on the scientific community

Article-level metrics (ALMs) are used to quantify the impact of published articles-how published papers are being discussed and shared.

Author-level metrics assess the impact an author makes on the scientific community or field of the study.

Problem

Assessing the quality and impact of research outputs is necessary

Every Metric has its limitations

No easy way exists to measure scientific performance

Bibliometric Incentive

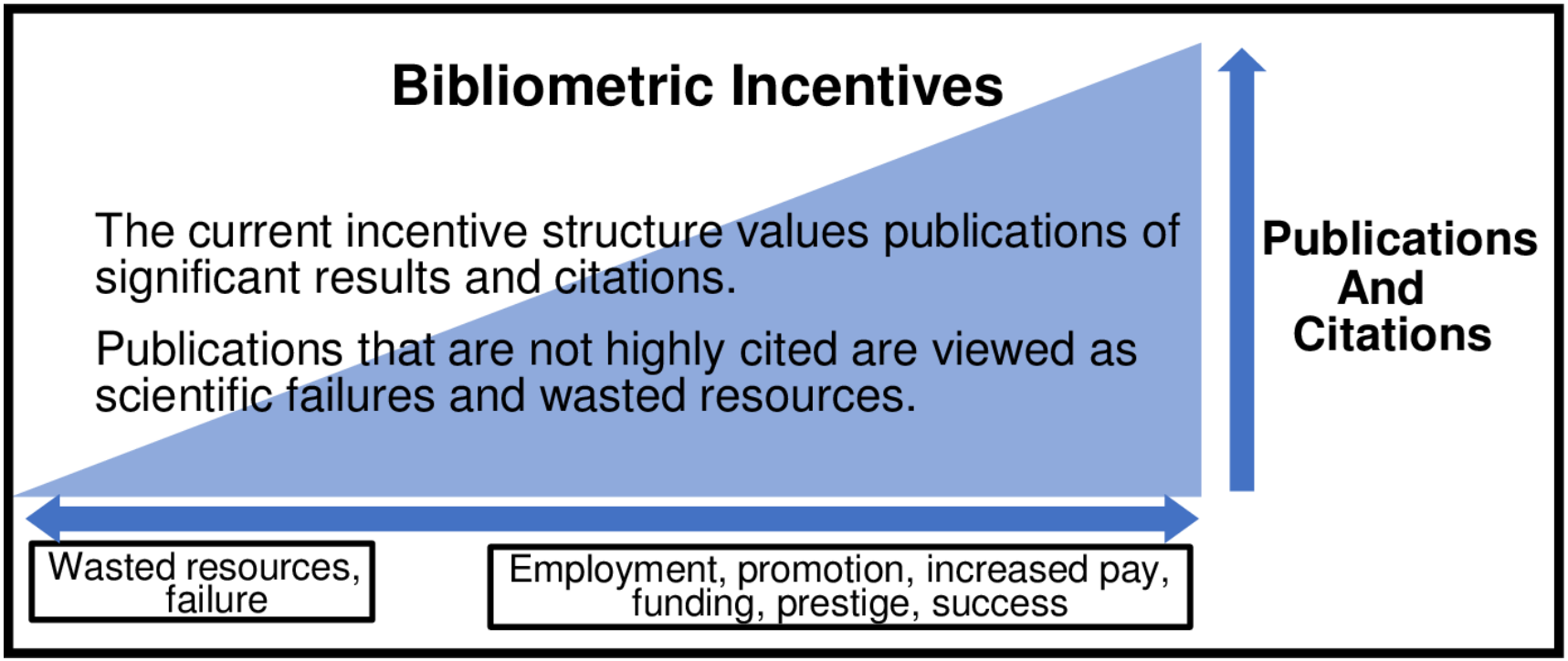

Figure 1: Bibliometric incentives model. [1]

[1] https://doi.org/10.1371/journal.pone.0195321.g001

Impact factor

What is Impact Factor ?

The Impact Factor is the average number of citations received by articles in a journal within a two-year window

$$IF(x) = \frac{Citations(x)}{Publications(x-2) + Publications(x-1)}$$

Note

Note that 2020 impact factors are reported in 2021; they cannot be calculated until all of the 2020 publications have been processed by the indexing agency.

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Altmetric Attention Score

Altmetric Attention Score tracks online shares and conversations relating to a piece of published research.

It is calculated using data collected around research articles such as mentions on social media, news outlets, blogs, patents, etc.

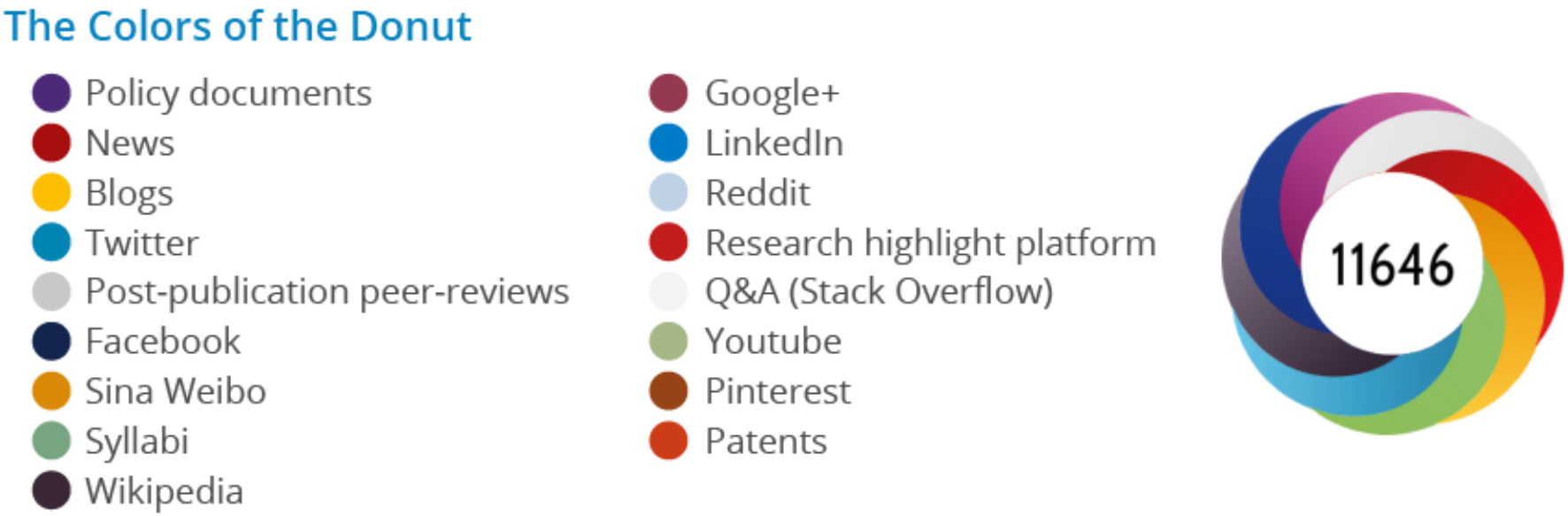

Figure 2: The colors of different sources of attention

Advantages to using altmetrics and limitations

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Blocks and columns and simple animation

Sample ordinary block

You can use *columns* environment to split a slide into 2 or more parts.

Props and cons lists

Use *propslist* and *conslist* enveroments to show props and cons as a list respectively.

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Sample example block

Example: For example you can implement props and cons with use of columns.

Sample citations

Citation in LaTeX with Bibtex

To cite something just add your bibitem in *references.bib* file and use *cite* command with corresponding name. Everything else will happen **automatically**!

I claim something very important and have to cite this paper [**?**], this article [**?**], book [**?**] and preprint [**?**].

Where to find citation bibtex item

Please use citation *BibTeX* item from Google Scholar

Inserting images

Figure 3: Big picture

If you want 2 side image, use *subfigures*

(a) White

(b) Blue

Figure 4: Main caption

References I