Doathon, an initiative to define collaboratively a roadmap for next generation science, technology and innovation metrics

Towards a new research agenda for Scientometrics

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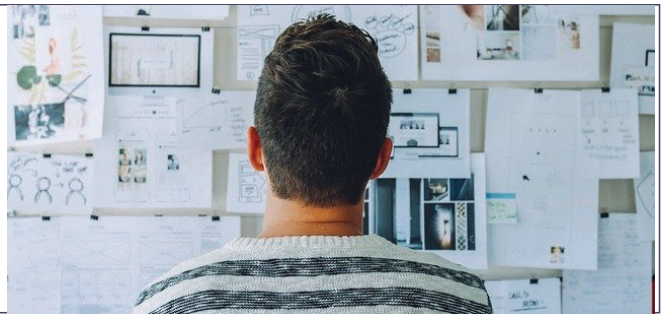
Introduction

Societal and environmental challenges are shifting the conception about how science is performed and how research is assessed.
Globally, initiatives such as Open Science, Responsible Research and Innovation, San Francisco Declaration, as well as organisations as CESAER or the EU are expanding the reflection about the responsible use of indicators.

However, scientometrics is still focused mainly on evaluating scientists.
We want to go beyond that, and to propose a broader agenda for scientometrics that is more relevant to society.



Objectives

- Our first objective is to **share an initiative** started within the Latin-American community **to develop a roadmap** for a more encompassing, socially, and environmentally relevant agenda for scientometrics and the **responsible use of indicators for research policy implementation**.
- Our second objective is to share this initiative with a wider community to collaboratively explore relevant and useful indicators to assess scientific activities, reward researchers, and support policy decisions.

Methodology

A **Do-a-thon approach** was adopted, **starting with a survey as the basis for subsequent discussions**, which the team led in September as part of the **Latmétricas 2021** event.
There, we organised a session where attendees were asked to define the objectives for a new research agenda. During this discussion, the **participants identified barriers and drivers to reach such goals**. For the discussion, we used a Design Thinking methodology. The session is available at https://bit.ly/3pUgFc5
Then, **we analysed the survey results and the outputs of the live session** to understand the main barriers, supporters and goals to promote a next stage in indicators uses.

Results

An analysis of the 53 responses to our survey shows that respondents **call for quantitative information to help understand the local impact of research** and the **broader impact of science on society and the environment**.
The **main barriers are**: lack of funding for STI; insufficient scientific understanding by non-academic groups; inadequate incentives for researchers; deficiencies in policymaking due to the lack of interest in governments to make use of science for it.
The **main propellers** are: building **regional networks** for indicator construction and use, fostering **interdisciplinarity and transdisciplinarity**, and valuing **non-scientific knowledge**

Analysis

We found two main subjects from interest:

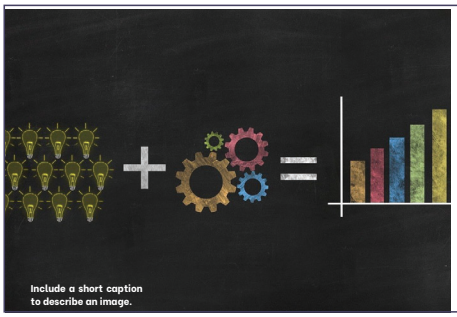
- The **importance of local knowledge**
- and the **value of societal impact**

Worldcloud of research priorities (Source: survey)

Within these subjects, we found the following **thematic clusters**:

- **National Systems of Evaluation**: need for research on all aspects of evaluation beyond recognition of scientists: social impact, knowledge construction practices, quadruple helix collaboration.
- **Science-Society Relations**: Research on alternative mechanisms to communicate scientometrics research to non-academic stakeholders
- **Infrastructure and Data**: Need to study how to integrate different research information systems and to produce novel data from alternative data sources: innovation in informal economy, science in non-academic institutions such as hospitals, etc.

Barriers and primer drivers for a new research agenda (Source: do-a-thon)



Conclusion

Two main key areas were identified by the Latin American community of scientometrics **to open up the research agenda in scientometrics**:

- **Analysis of local knowledge production**
- **Social impact of science**

These areas were further elaborated during the Latmétricas 2021 event.

The obtained outputs will help us in developing a Wiki to **promote and foster further paths of research** with the global community.

Related Literature

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