

Mapping R&D to policy goals and societal challenges

RISIS Policymakers Session

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VINNOVA
Sweden's Innovation Agency

Content

- General about use of bibliometrics in R&I-policy development
- How to capture policy-relevant research fields?
- Data infrastructure
- Use of bibliometrics in the development of Missions
- Living up to claims?
- Connection of research to societal processes

Use of bibliometrics in R&I-policy development

- Bibliometrics as a means to explore the organizational and cognitive structure and dynamics of scientific research
 - Potentially very useful
 - Underutilized
 - "Internal" challenges (capture policy-relevant research fields; all kinds of data-cleaning; coverage of data bases; etc....)
- Usefulness in policy development processes
 - Conditions for utilization very different from those in "evaluation"
 - Stand-alone bibliometric results of limited use
 - Co-creation with policy professionals (and area specialists) necessary
 - Bibliometricians (or their research colleagues) need to understand policy context and issues
 - How to find policy professionals who have the necessary interest in and skills and time for working together with bibliometricians?
 - Need to be modest and not oversell!

Data infrastructure

- RISIS a great initiative!
- CWTS has made great contributions to the development of bibliometrics
- A pity that no Swedish organization is a member of RISIS. Can hopefully be changed.
- Vinnova is supporting various national initiatives in Sweden to create useful data infrastructures
 - Bibliometrics at KTH Royal Institute of Technology Library
 - Database of innovations in Sweden captured through trade journals at Dept of Economic History at Lund Univ
 - Internationally oriented firms with significant innovation activities in Sweden

How to capture policy-relevant research fields?

- Various options
 - Cluster method and algorithms developed by CWTS
 - Topic-cured databases (PubMed, Inspec?....)
 - Text-mining using AI
 - Key-word searches
 - Journal categories (e.g. WoSc Categories)
 - Other?
- To what extent have these methods been systematically compared and evaluated?
 - Strengths and weaknesses?
 - Useful ways of combining methods?
 - Special challenges to capture "research tools" which can be applied in a wide variety of fields
- Why was Clustering method not more utilized in the work presented?

Use of bibliometrics in the development of Missions

- Missions is a "new" approach in innovation (rather than research) policy which is still under development and its practicality to be proven.
- Research is likely to play an important role in the implementation of Missions but as an activity to directly solve "real world" problems ("knowledge on demand") rather than as an activity to develop research-based knowledge as such.
 - Missions in Horizon Europe are expected to deliver results by 2030
- There is a general movement towards trying to link academic research to societal challenges
 - Should be seen as something much broader and long-term than Mission initiatives currently under way at country or EU-level
- The way of using bibliometrics in these two different contexts is likely to differ. Don't just focus on the first!
- There are also many other ways in which "alternative bibliometrics" can be useful for policy development at organizational, regional, national and EU levels.

Living up to claims?

- Claim of policy relevance rather carefully formulated.
- Presentations include plenty of interesting data
- Some distance away from identifying key policy issues and providing clearly relevant analysis.
 - Maybe not intended and should not be expected considering need for co-creation?
- Research effort vs. Disease burden?
 - As mentioned no necessary connection.
 - To what extent is lack of knowledge the bottleneck for prevention or cure?
 - Motivation and justification for investing in research at individual, organizational, national EU and global level is a highly complex matter which is usually dealt with simplistically in public debates, including by researchers arguing their own interests. Deserves some serious thoughts!
 - What is the role of research in a particular country? To develop solutions for that country or to contribute to global research efforts and create channels to the international research community?
 - Path dependence of internationally competitive research (research which can make a real difference in the global research system) in a particular research group, research institution or country?
- Connection with industry
 - Example: AstraZeneca has no oncology research in Sweden but big effort in Cardiovascular & Metabolic diseases. Novo Nordisk in Denmark is strong in diabetes-related research (metabolic diseases). Spills over into neighbouring Sweden, not least at Lund univ

Connection of research to societal processes

- Connectedness at "research community level". Yes!
- Connecting bibliometrics with other data sources
 - Sounds very interesting
 - Would like to understand potential and pit-falls
 - How to gather a relevant set of policy documents? etc.
- Co-authorship with industry or industry in acknowledgements of industry connection. Works reasonably well.
- Non-academic hospitals as a proxy for clinical research???
- Use of local languages as an indicator of local connectedness???

Thank you!

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