

# Research Assessment in Czechia

## Getting better but not there yet

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# Agreement on Reforming Research Assessment

## Some relevant commitments

- Recognize the **diversity of contributions to research** in accordance with the needs and nature of the research ...
- Base research assessment primarily on qualitative evaluation for which **peer review is central**, supported by responsible use of quantitative indicators
- **Abandon inappropriate uses** in research assessment of journal- and publication-based **metrics**

# History of research assessment in Czechia

- **Pre-2013**
  - Pure bibliometry and assignment of points to individual outputs according to a specific formula
- **2013-2017**
  - Bibliometry expanded to peer-review evaluation of selected outputs/results (evaluation panels) and separate evaluation of applied research
- **2017+**
  - More sophisticated research assessment system consisting of five separate modules for which peer-review is central

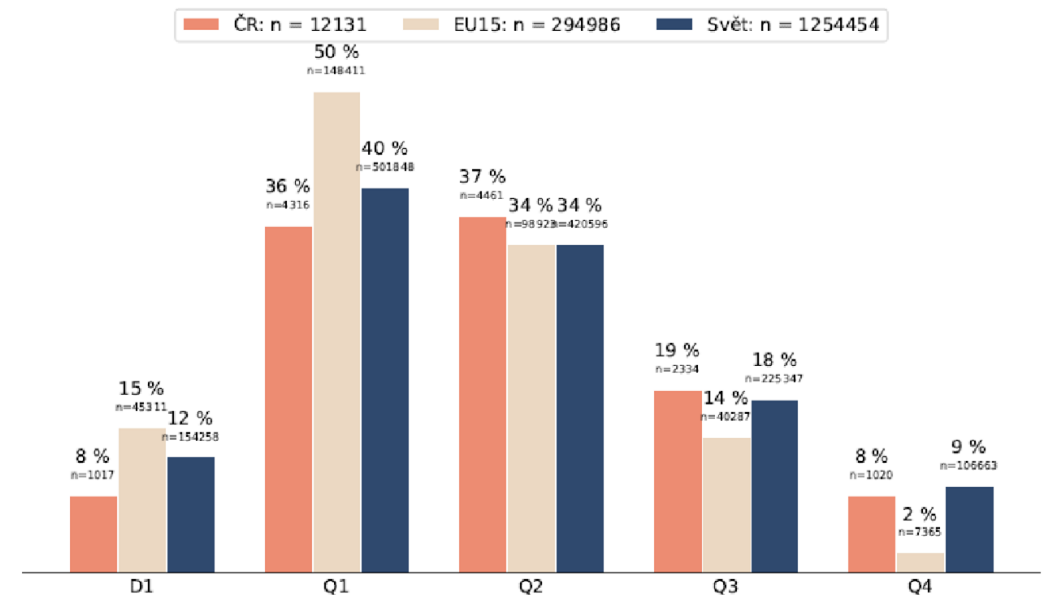
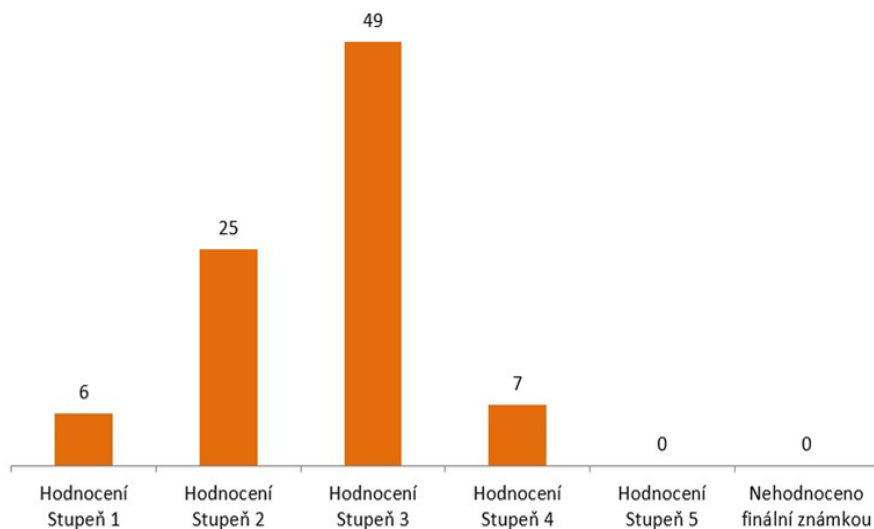
# Czech National Evaluation System (M17+)

- **Module 1**

- **peer review** of outputs selected by research organizations

- **Module 2**

- bibliometrics based on results included in **WoS** (and Scopus for humanities)
- **quartile profile** of RO or FORD based on AIS
- **international benchmarks** (EU15, world)
- results are always commented/interpreted by panelists (**peer-review**)



# Czech National Evaluation System (M17+)

- **M3 Social relevance** (*to industry, public sector, other RO's*)
  - *National level: outputs which cannot/should not be assessed in M1 (conferences, textbooks, popularization of science, patents, contracted research, ...)*
- **M4 Viability**
  - *management, international collaboration, external funding, human resources...*
- **M5 Strategy and Policies**
  - *Including future plans, development, strategy of research direction, support of young researchers, etc...*

The final output of M17+ is a ranking of research organizations on the scale **A** (excellent) – **D** (below average), respecting its mission (universities, Academy of Sciences institutions, other research institutions)

Assessment is not supposed to be a direct tool for distribution of financial support  
(but it should provide important information to do it)

# Czech National Evaluation System (M17+)

- **Modules M1/M2 run every year**
  - Continuous monitoring
- **Modules M3-M5 run every five years**
  - Every five years full evaluation of research organizations, merging results from all modules
- **Core module for evaluation of research outputs is M1**
  - **peer review** of outputs
  - two criteria: contribution to knowledge (basic research), societal relevance (applied research, benefit to society)
  - a variety of outputs – monographs, proceeding articles, patents, ...  
(**diversity of outputs** beyond journal publications, **irrespective of language**)
  - show the best you have produced...
- **M2 is a supportive Module important especially for natural and medical/health sciences**
  - It uses bibliometry, but the results are never directly transformed (re-calculated) to ranking/marks
  - Results **interpreted and commented by panelists**
  - Results interpreted in the light of the mission of a particular research organization
  - Hopefully, this should not be considered as “inappropriate use of bibliometrics”

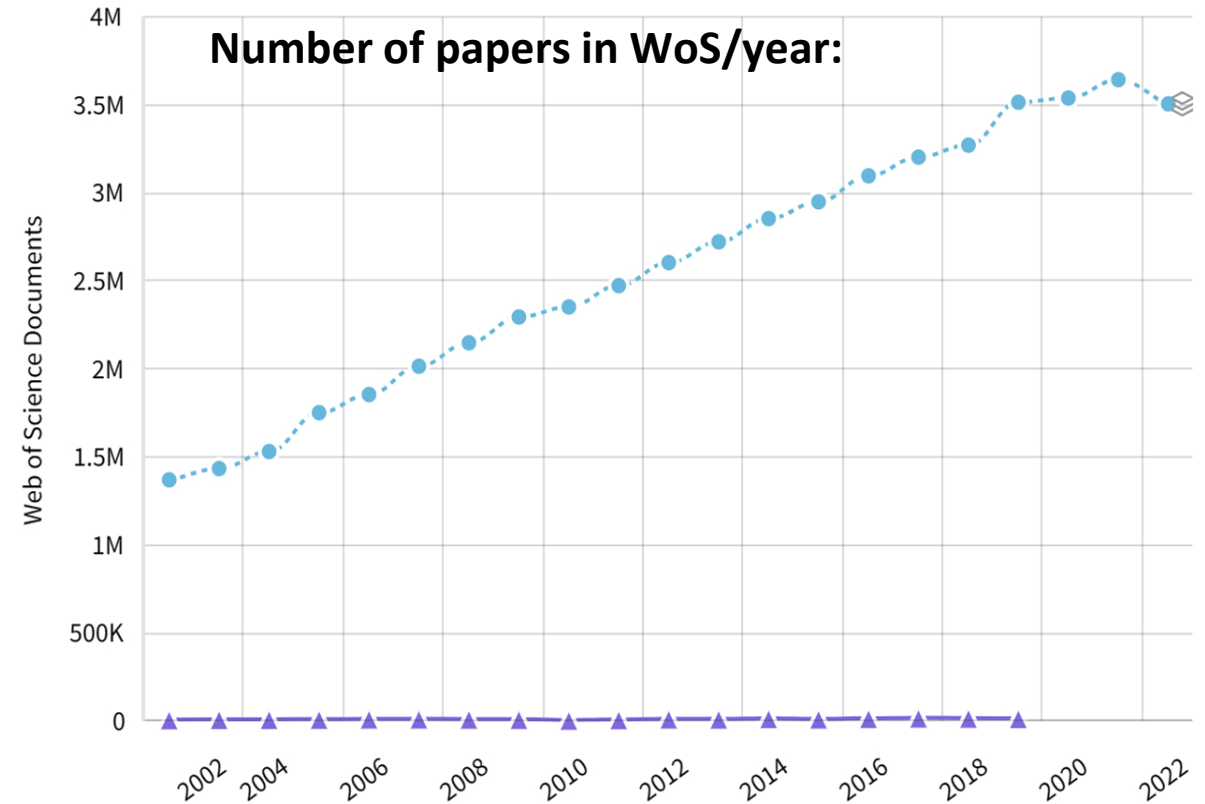
# Identified Problems

- **Evaluation of Applied Research**
  - What is high-quality applied research? Different view in different research fields (natural, engineering, medical, social, humanities)
  - Difference between “research” and “engineering” (Frascati manual)
  - Lack of high-quality evaluators able to assess applied research
- **Do we need to run M1/M2 annually?**
  - Administrative burden
  - Added value?
- **Interdisciplinary research**
- **Low involvement of international reviewers in M1**
  - But 30% of outputs in Czech, mainly from research organizations run by ministries
  - Increase of international reviewers is important especially for universities and Academy of Sciences
- **Connection between evaluation and mission of a research organization**
- **Peer-review process**
  - Objectivity
  - Cost of the process
  - Availability of reviewers

# Peer-review and over-publishing problem...

- **Stop the peer-review treadmill. I want to get off**
  - *Nature* **614**, 581-583 (2023)
- **The increasing problems with reviewer fatigue and distrust need to be considered**
  - G. Sivertsen, The new European reform of research assessment, R-QUEST Policy Brief no. 7 (2022)

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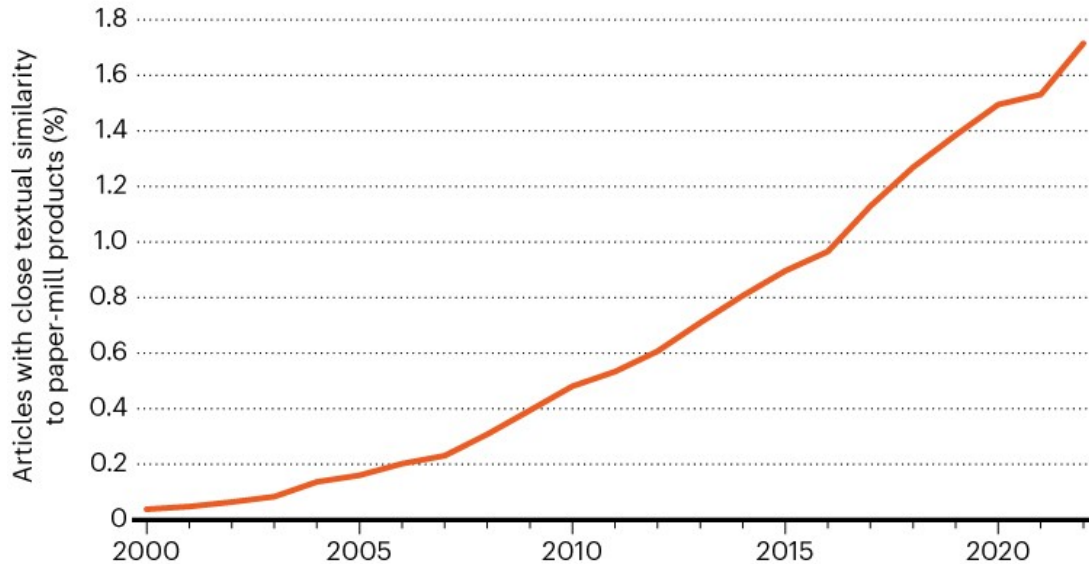
# Over-publishing and fake research...

- **How big is science's fake-paper problem?**

- *Nature*, 6 November 2023

## THE PAPER-MILL PROBLEM

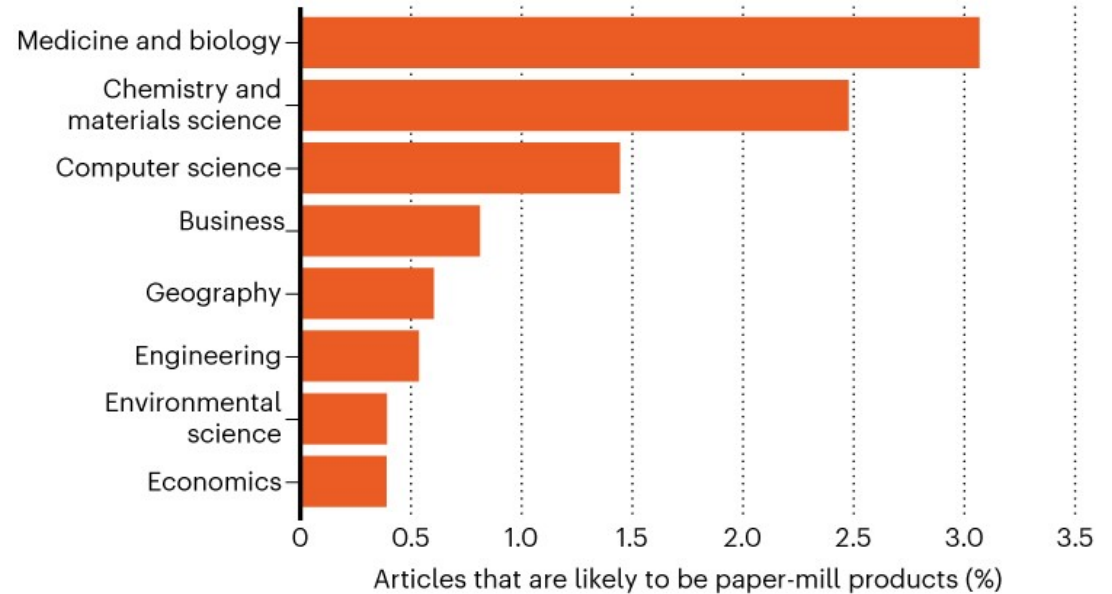
A software analysis finds that articles with close textual similarity to paper-mill products are rising as a proportion of the literature.



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## SUBJECT BREAKDOWN

The scientific disciplines with the highest proportions of paper-mill articles are biology and medicine, and chemistry and materials science, the analysis suggests.



Subject fields from analysis of 'concepts' associated with some research articles in OpenAlex database.

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- ...other issues, such as „fake“ references

2 peaks (Fig. 3c), is likely to be caused by an aggregation of the pigment molecules with participation of the solvent molecules as suggested by Hager<sup>25,26</sup>. This formation of polymers-like would lead to an alteration in the