

# Open Access and the Ecology of Competition

Mannheim Open Science Event 2019:  
Dr. Marc Lerchenmüller, MPH, MFE



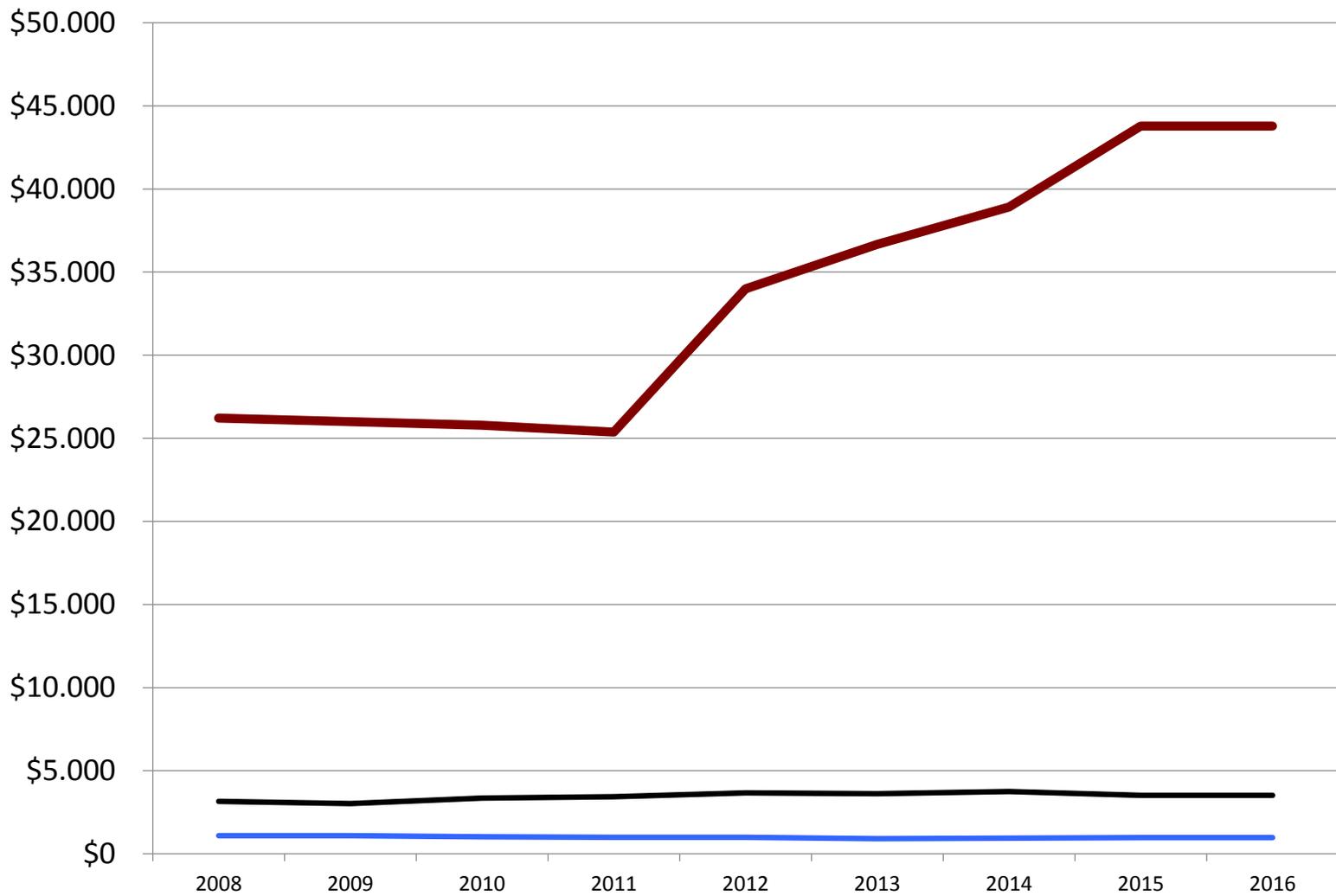




Photo courtesy of Dick Dunbar

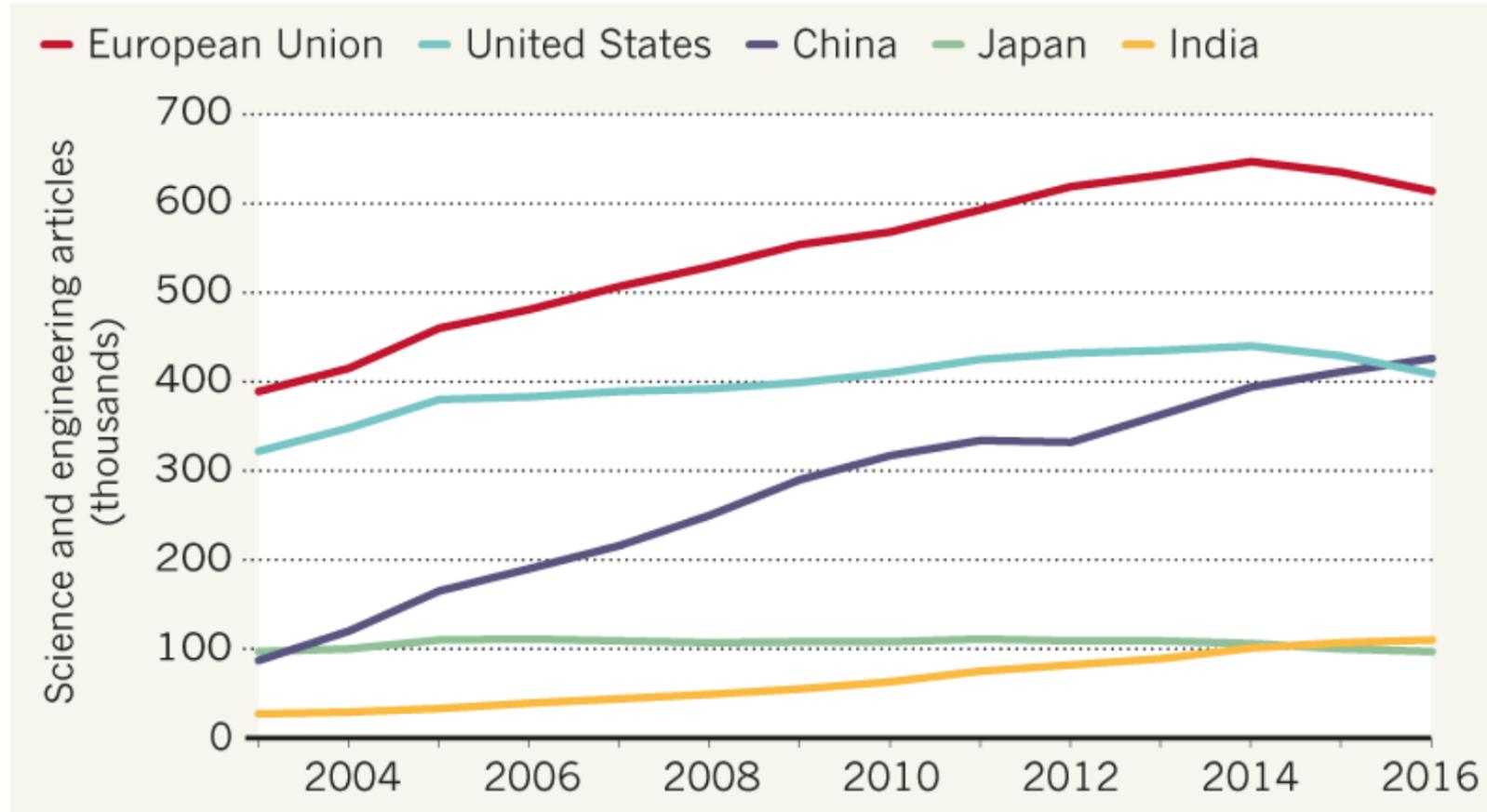


# Publish in High JIF or Impoverish



Source: Quan, Wei, Bikun Chen, and Fei Shu. "Publish or impoverish: An investigation of the monetary reward system of science in China (1999-2016)." *Aslib Journal of Information Management* 69.5 (2017): 486-502.  
Source: Xie, Qingnan, and Richard B. Freeman. *Bigger than you thought: China's contribution to scientific publications*. No. w24829. National Bureau of Economic Research, 2018.

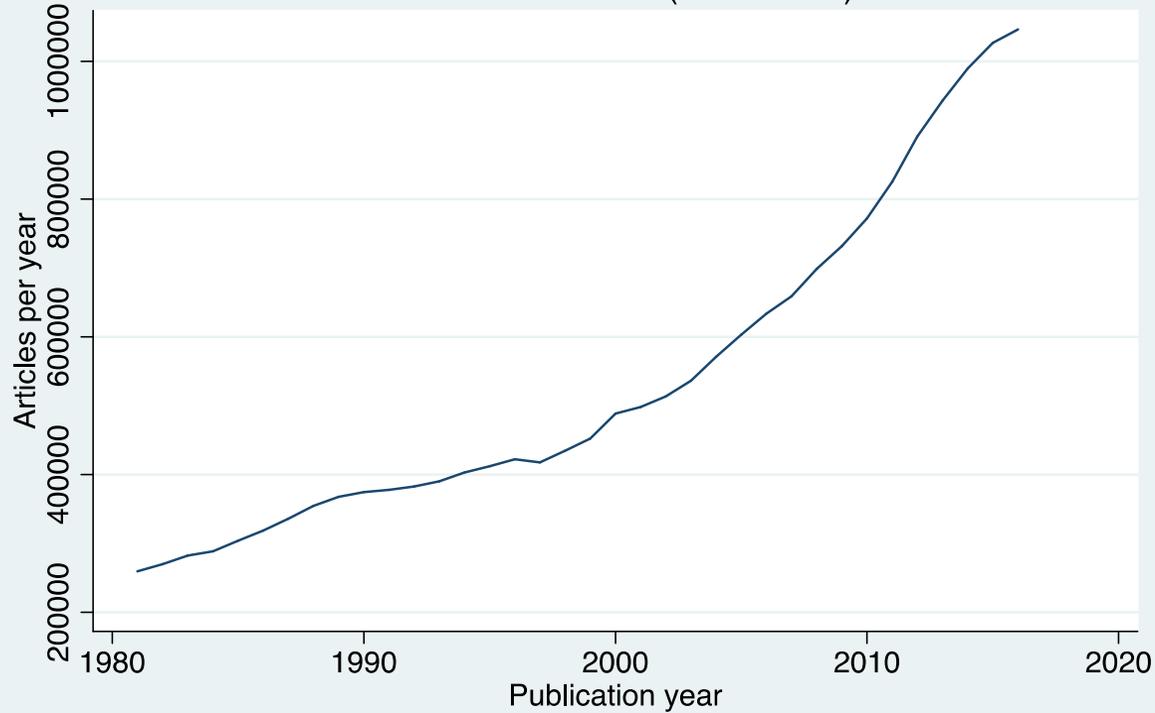
# China declared world's largest producer of scientific articles



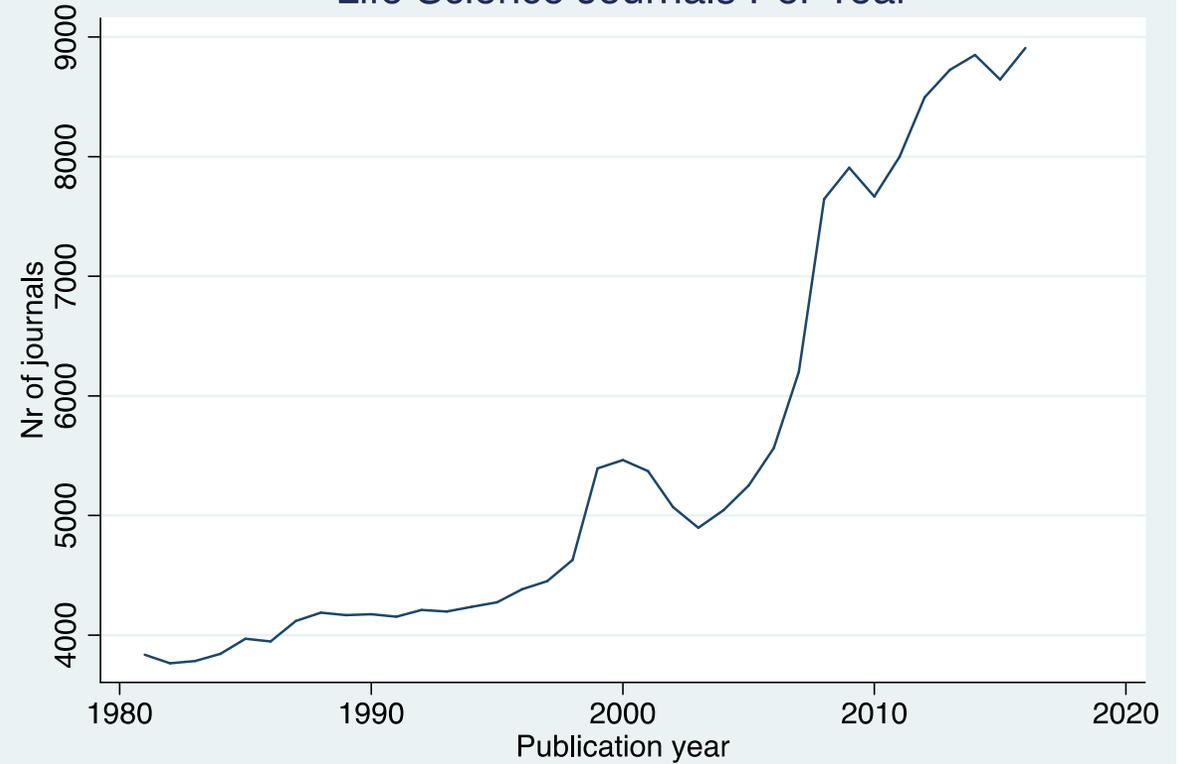
# Separating the wheat from the chaff

## Life Science Articles Per Year

20.6 million articles (1980–2017)

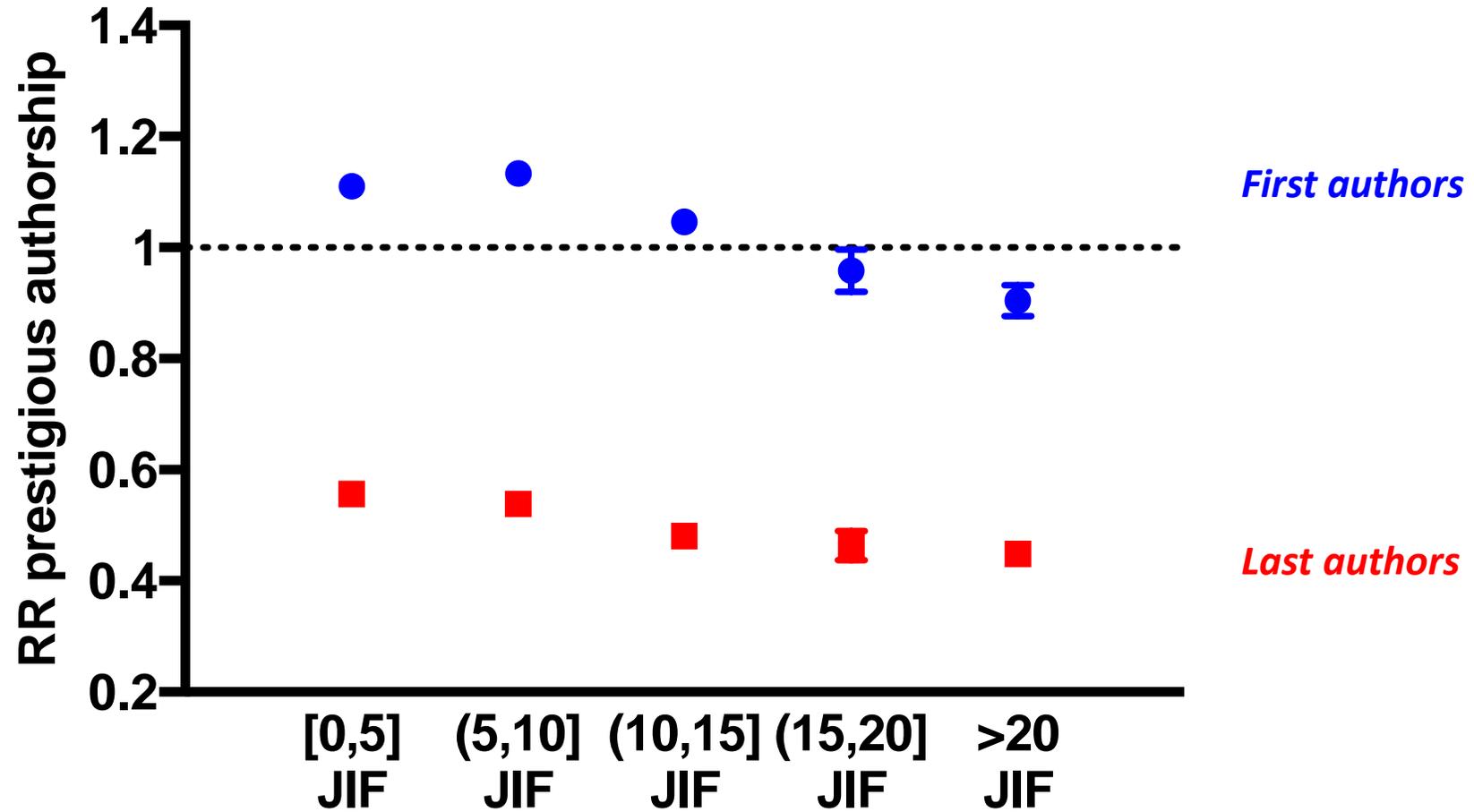


## Life Science Journals Per Year



# Women challenged to publish in high JIF – negative impact on careers

600,747 articles (1985 – 2015)



Circulation



## Budapest Open Access Initiative (BOAI)

- Conference of the Open Society Institute 2001
- Peer-reviewed journal literature as a public good
- Free and unrestricted world-wide electronic access

OPEN  ACCESS

DOAJ DIRECTORY OF  
OPEN ACCESS  
JOURNALS

Two different routes:

- 1) **Publishing in Open Access Journals**
- 2) Self-archiving by researchers

SCIENCE  
EUROPE



## Initiative “cOAlition S”

- Funders from 11 countries mandate open access
- ERC supports initiative



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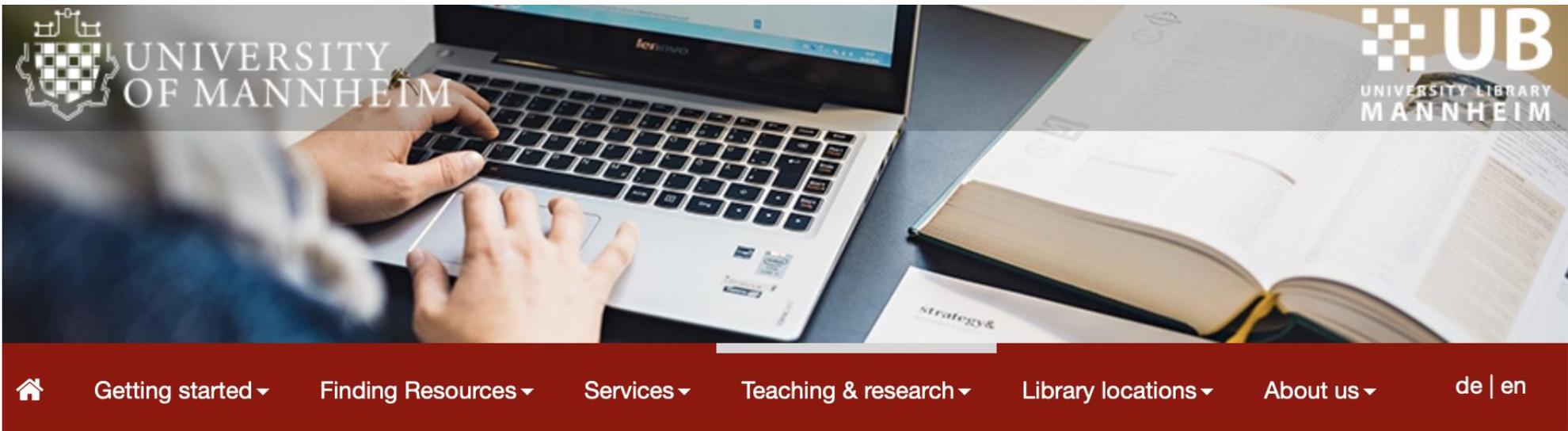
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# Open access policy

Published outputs that arise from our funding must be open and accessible to everyone.

**From 1 January 2021 our [open access policy is changing](#) [PDF 158KB]. Read our [explainer](#) about what will be different and why, and our [frequently asked questions](#) [PDF 282KB] for more information about the changes. Until then, researchers must continue to comply with our current policy.**



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# Open Access Policy of the University of Mannheim

The University of Mannheim's profile is characterized by its renowned Economic and Social Sciences, interwoven with strong Humanities, Law, Mathematics and Informatics. According to the university's mission statement, this clear-cut subject portfolio aims at a high visibility in research and teaching.

Against this background, the University of Mannheim views Open Access as a highly effective publication model to enhance the dissemination of knowledge in a sustainable way. According to the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, Open Access signifies free and unrestricted worldwide access to scientific knowledge via the Internet.

## 50 Journals used in FT Research Rank

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# Literature – select findings

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## Who profits from free access to research?

- *Open Access impact on citations is > 2x in developing countries<sup>1</sup>*

## Who publishes in Open Access?

- *First authors who choose to publish OA tend to be more senior (PNAS only)<sup>2</sup>*

## Impact of Open Access publishing?

- *OA articles receive more citations and public attention (article usage; Nature Coms only)<sup>3</sup>*
- *OA articles have a longer period of attention than non-OA articles (downloads)<sup>3</sup>*

1. Evans J. A./ Reimer J. (2009): Open Access and Global Participation in Science, *Science*, Vol. 323, p.1025

2. Eysenbach G. (2006): Citation Advantage of Open Access Articles, *PLoS Biology*, Vol. 4(5): e157

3. Wang X./ Liu C./ Mao W./ Fang Z. (2015): The open access advantage considering citation, article usage and social media attention, *Scientometrics*, Vol. 103, pp.555-564

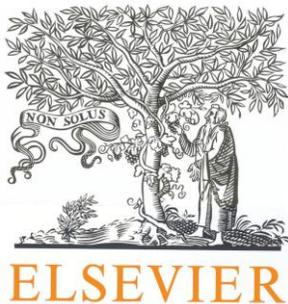
# Data – journal level (L. Schmallenbach, PhD candidate ©)



**12,592 Open Access Journals** recorded in  
the Directory of Open Access Journals (DOAJ)



Matched **SJR** Database (on ISSN) from 1999 – 2017 → **3,527 matches**

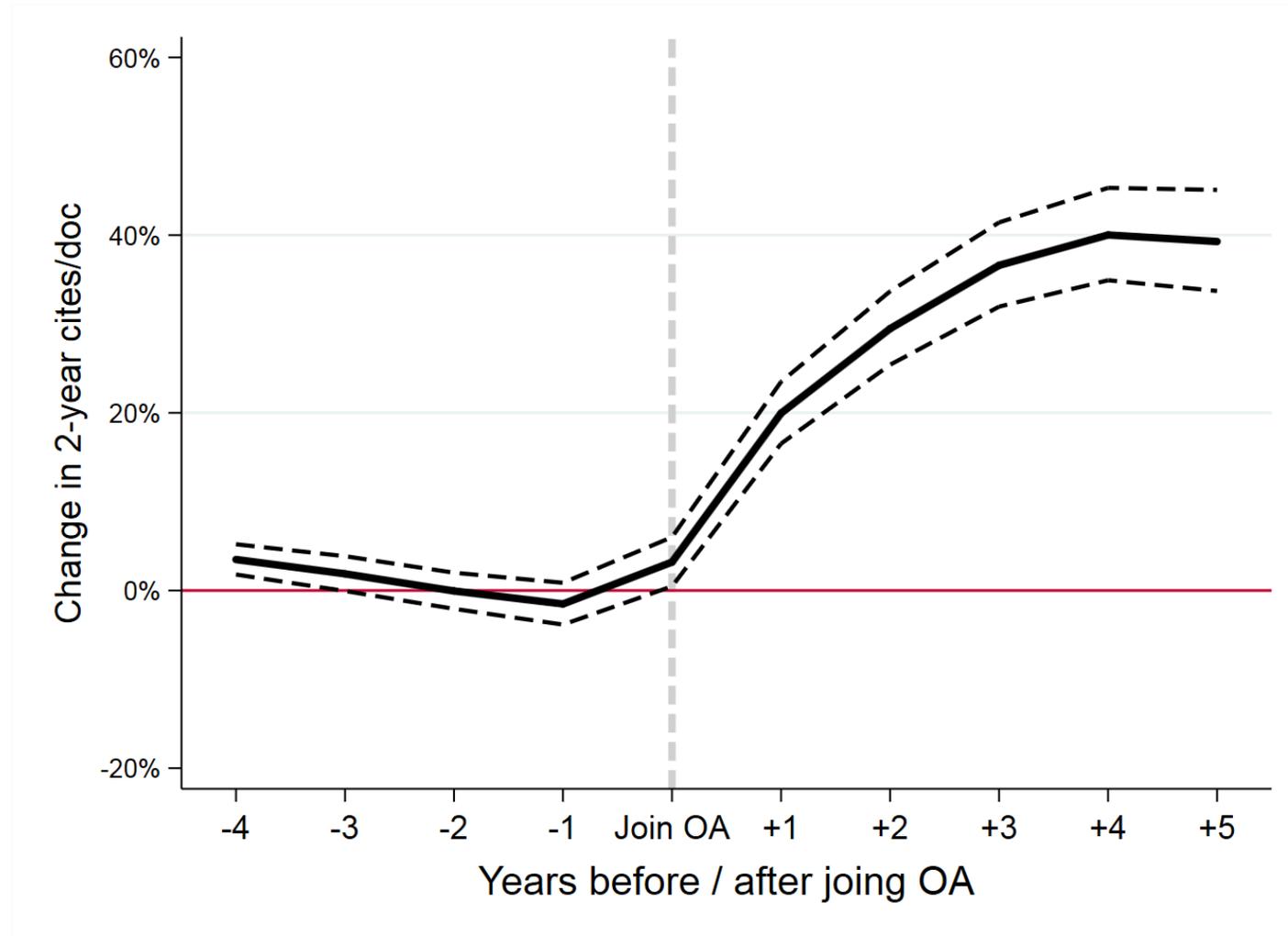


Focus on latest available SJR data from 2017

- **3,475** Open Access Journals
- **20,910** Subscription based journals (including hybrid journals)
- Covering more than 70 million publications

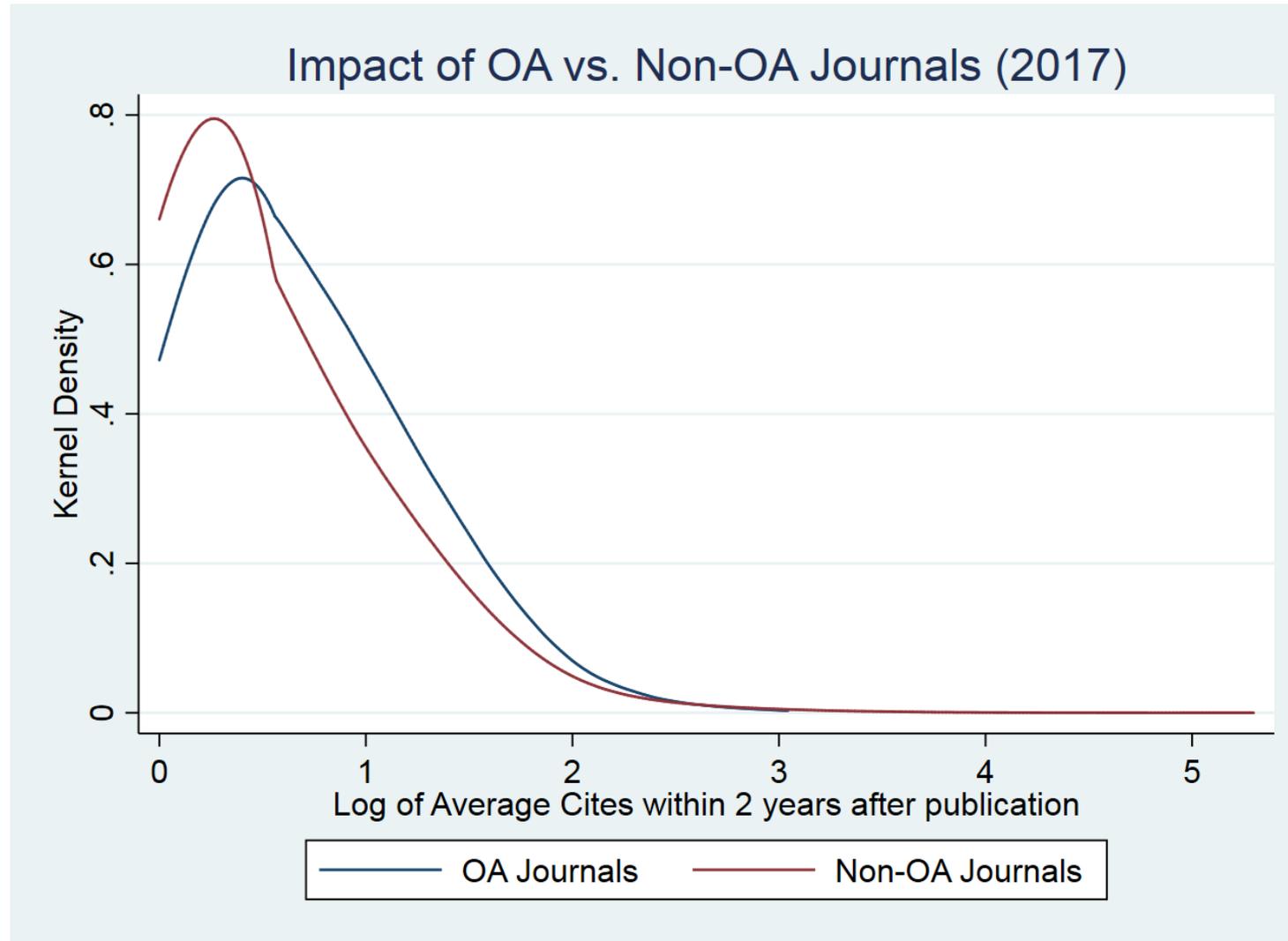
<b>Field</b>	<b># Non-OA Journals</b>	<b># OA Journals</b>	<b>Share OA Journals</b>	<b>Total # Journals</b>
Biochemistry, Genetics and Molecular Biology	164	68	29.31%	232
Biochemistry	336	82	19.62%	418
Medicine	2,453	363	12.68%	2,816
Sociology and Political Science	921	120	11.53%	1,041
Management Science and Operations Research	127	13	9.29 %	140
Organizational Behavior	157	16	9.25%	173
Business and International Management	302	21	6.50%	323
Marketing	142	9	5.96%	151

# Joining Open Access boosts citations?



\*3,505 journals, 32,982 observations, Reference Category: more than 4 years before Joining OA  
Fixed effects Linear model, SEs clustered by journal, Year Fes

# Open Access journals overrepresented in lower impact range



\*Based on 24,385 journals between (1999–2017)



# Open Access and the Ecology of Competition

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**Open Access likely mainstay in soft money research fields (in the EU)**

**Open access appears to produce “good science” – cumulative knowledge**

**But what gets measured gets done ?**

Thank you  
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