The impact of the German ‘DEAL’ on competition in the academic publishing market

Justus Haucap\textsuperscript{1}  Nima Moshgbar\textsuperscript{2}  W. Benedikt Schmal\textsuperscript{1}

\textsuperscript{1}HHU Düsseldorf, DICE
\textsuperscript{2}KU Leuven

OASPA Webinar: The Fully Open Access Agreement an essential component of a diverse, open access world
Motivation

- Academic journal subscriptions have faced tremendous price increases – mostly driven by commercial publishers
- High market concentration: The five largest publishers represent the lion’s share of publications
- Researchers contribute their work mostly for free
- Library budgets are constrained and often tax-payer funded
- Declared goals of the ‘DEAL’ project:
  - “Immediate open access publication of all new research articles” by authors from German institutions
  - “Permanent full-text access to the publisher’s complete journal portfolio”
  - “Fair and reasonable pricing”

https://www.projekt-deal.de/about-deal/
The German ‘DEAL’

- Buyer side: ~700 scientific research institutions in Germany
  → All German universities, universities of applied sciences, and research institutions, e.g. Max Planck, Fraunhofer, Leibniz, Helmholtz etc.
- Seller side: (Elsevier), Springer Nature, John Wiley & Sons
- Long negotiation period: Kick-off in spring 2016
- Contract with Wiley: January 2019
- Contract with Springer Nature: January 2020
- Elsevier: left negotiations – many subscriptions canceled
DEAL Conditions in brief

- 3 types of Journals: Hybrid, Full Open Access, Read Only
- Hybrid Journals: 2,750 € ‘Publish & Read fee’
- Full Open Access: 20% discount on list price
- Number of journals:
  - Springer Nature: 1,900 Hybrid, 440 Full OA
  - Wiley: 1,420 Hybrid, 110 Full OA

- Costs for hybrid journals are paid in advance by a clearing system
- Coverage by the research institution → no direct costs or effort for researchers
  → Hybrid journals particularly attractive

More on Springer Nature contract: https://www.projekt-deal.de/springer-nature-contract/
More on John Wiley & Sons contract: https://www.projekt-deal.de/wiley-contract/
Our research

Research Question

Do (hybrid) DEAL journals get more attractive for researchers at German institutions?

→ Change in the probability that a paper gets published in a DEAL journal?

- Why is research on publications relevant from an economic perspective?
- Academic journals are two-sided markets, i.e. platforms: More readers attract more submissions and better submissions attract more readers
- Risk of tendency towards monopolization
Research Setting

- 1,005 journals in the field of chemistry ~ 1,4 million publications
- Years covered: 2016 – 2020, 1 Million observations used
- Chemistry: Short turnaround times
- Empirical method: Heteroskedastic Probit Model to estimate probabilities
- Causal Identification: Difference-in-Differences (DiD) set-up
- DiD: We treat the implementation of DEAL as a natural experiment. Hence, we compare not only pre and post DEAL, but the ‘treatment’ effect of DEAL relative to a control group


- Country Fixed Effects + Control variable for journal quality via H-Index and SCImago Journal Rank
Figure 3 from Haucap, Moshgbar & Schmal (2021)
Results cont’d: Effects by Journal Rank

Average Marginal Effects with 99% CIs

Figure 4 from Haucap, Moshgbar & Schmal (2021)
Competition Implications

- Caveat: Early evidence
- A lot of movement within the market (e.g., Frontiers, MDPI)
- Open Access mixed with easy administrative processing
- But: ‘DEAL’ contracts make the journal portfolio’s of large publishers more attractive → further concentration?
Conclusion

- First large-scale investigation of changes in publication behaviour due to DEAL contracts in Germany with causal identification
- Probability to publish in a DEAL journal increases by 3.6%
- Further concentration in the publishing market?
- Is the future ‘hybrid’?
Thank you for your attention

More information:
Haucap, Moshgbar & Schmal (2021): The impact of the German ’DEAL’ on competition in the academic publishing market, Managerial and Decision Economics, forthcoming. Early (open) access: https://doi.org/10.1002/mde.3493