

Data Policies of Economics Journals – Shifting Boundaries?

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It is the policy of the American Economic Association to publish papers only if the data used in the analysis are clearly and precisely documented and are readily available to any researcher for purposes of replication.

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Instructions

As soon as possible after acceptance, authors are expected to send their data, programs, and sufficient details to permit replication, in electronic form, to the AEA Publications office.

1 Email: Please send the files via email, and include the manuscript number in the subject line of the email.

*Sven Vlaeminck,
ZBW – Leibniz Information Centre for Economics
INCONECSS conference, Berlin, 2019-05-07*

Agenda

- 1) Introduction
- 2) Research questions and methodology
- 3) (Some) Findings of the study
- 4) A comparison to the landscape in 2014
- 5) How to explain what has happened?
- 6) Outlook & discussion

1) Introduction

- Journals are on the forefront of the scientific ecosystem. They can be regarded as an important instance to ensure scientific quality and integrity
- This study examines how journals deal with empirical/data-based research by analyzing their data policies and specifications
- The study focusses on the 353 economics journals listed in the JCR-SSCI Economics 2017

2) RESEARCH QUESTIONS & METHODOLOGY

2.1 Research Questions

- How many of the impact factor journals in economics have a data policy (DP)?
- How are these policies structured? What do these policies ask authors to provide?
- Do we observe changes in the number of journals with data policies over the last few years? Did the quality of these policies changed over time?
- Do we mainly find (individual) journal data policies or (general) publisher policies?

2.2 Methodology

- Evaluation of the website(s) of each of the 353 journals.
- I noted...
 - Some properties of each of these journals (e.g. publisher, IF)
 - Whether the journal publishes empirical-/ experimental work or simulations
 - If the journal has a data policy (DP)
 - If a DP has been found, the requirements of the policy have been noted

2.2 Methodology (II)

- Specifically, the DPs have been checked for these characteristics:
 - Data(sets)
 - Program code/ software /scripts
 - Descriptions of the data and variables/ data dictionary/ codebook
 - Readme-files
 - Procedure in case of research based on restricted data
 - Policies' degree of obligation
 - Data deposit and accountability for data provision

- All of these aspects are important to foster reproducible research!

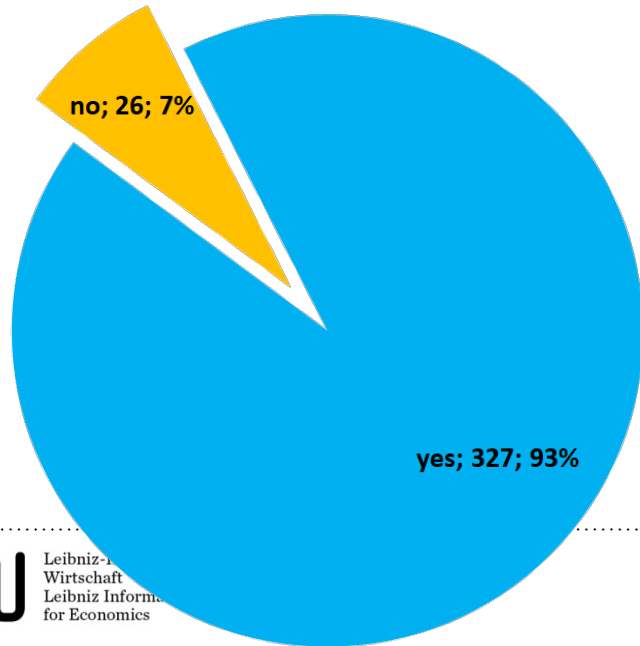
The current status quo

3) (SOME) FINDINGS

3.1 The share of journals with empirical contributions

How many JCR ECON journals accept empirical contributions?

(e.g. simulations, empirical analysis, experiments) (n=353)

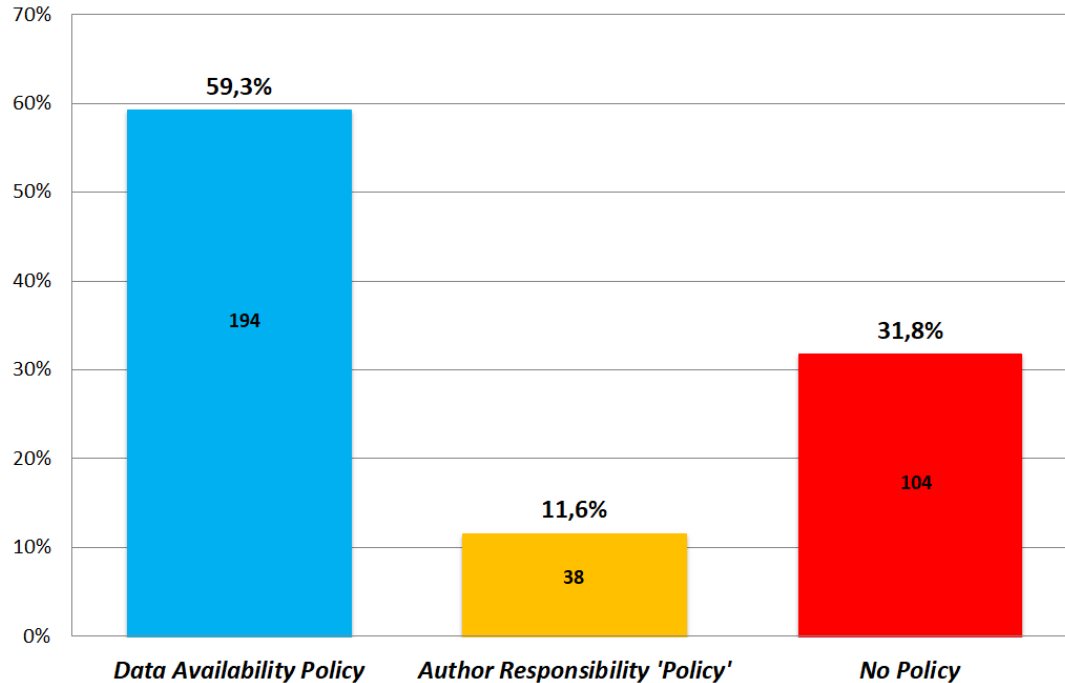


More than 90% of all journals in the JCR Economics (2017) generally publish empirical contributions (even if publishing empirical research may not be the main scope of the journal)

3.2 How many journals have a data policy?*

Data Policies of emp. Journals in the JCR Economics 2017

(n=327*)



...data policies have become quite common...

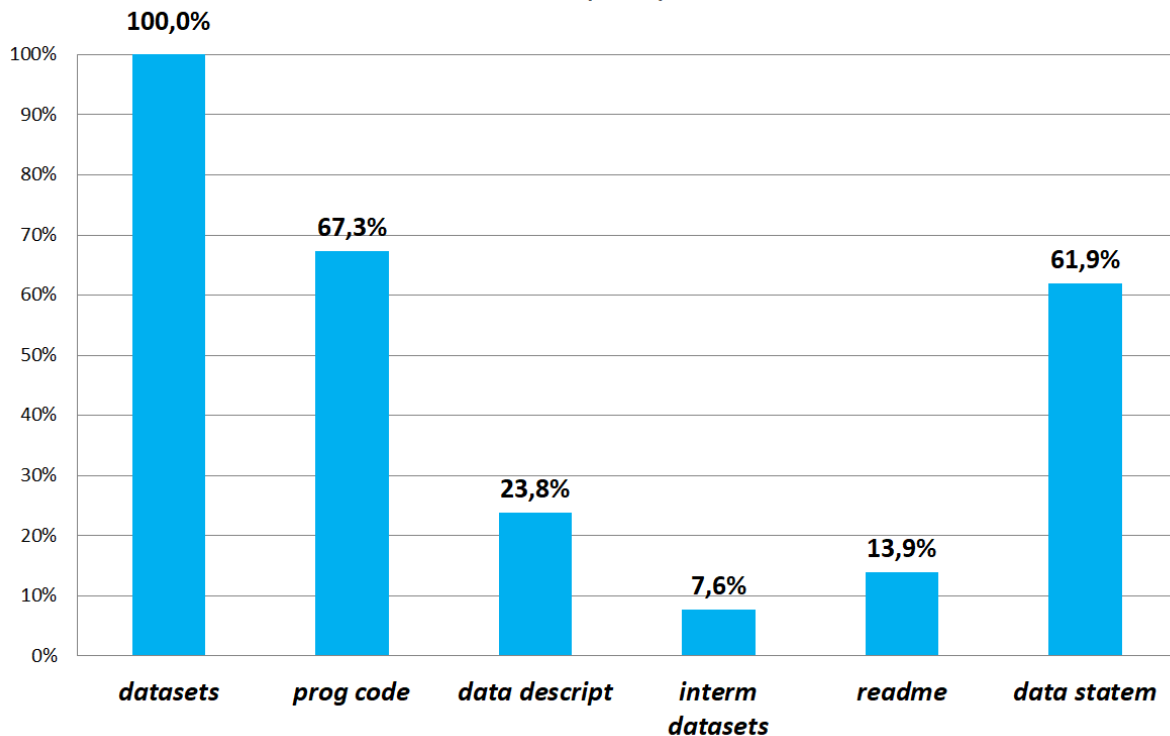
...but...

* please note: nine journals offer both a DAP and an



3.3 Specifications of journals' data policies

What authors have to provide to satisfy journals' data policies
(n=223)

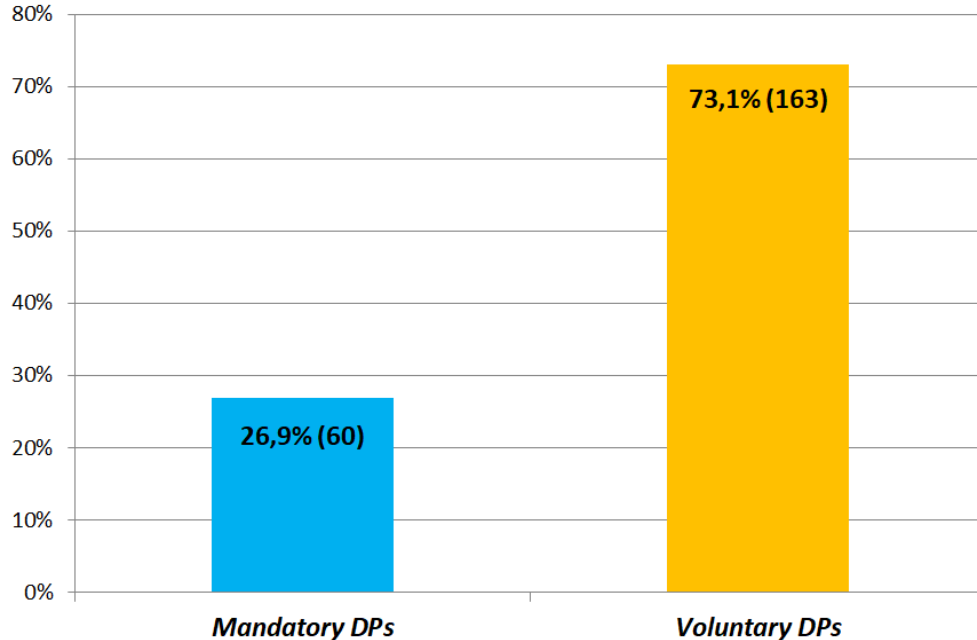


Policies generally ask for data – but many other (important) artefacts of the research process are not mentioned regularly



3.4 The share of mandatory DPs

The Share of mandatory and voluntary Data Policies
(n=223)

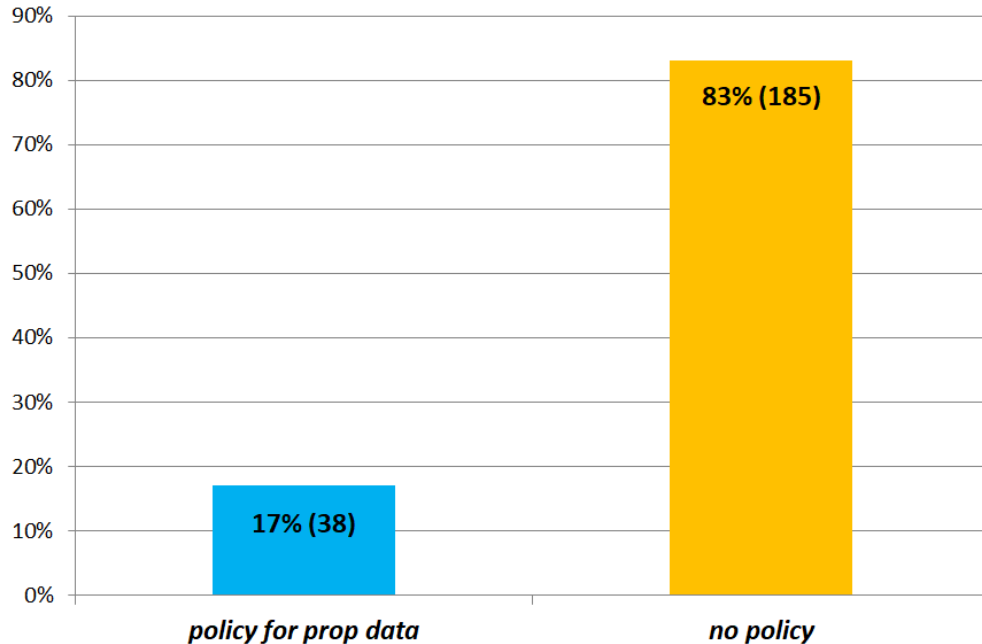


Most journals have not made their data policies mandatory



3.5 Procedure in case of exceptions

Do journals have a procedure for research based on restricted data?
(n=223)



Research, which is based on restricted data, is quite common in economics

But only a minority of the journals offers a procedure to foster reproducibility in these cases



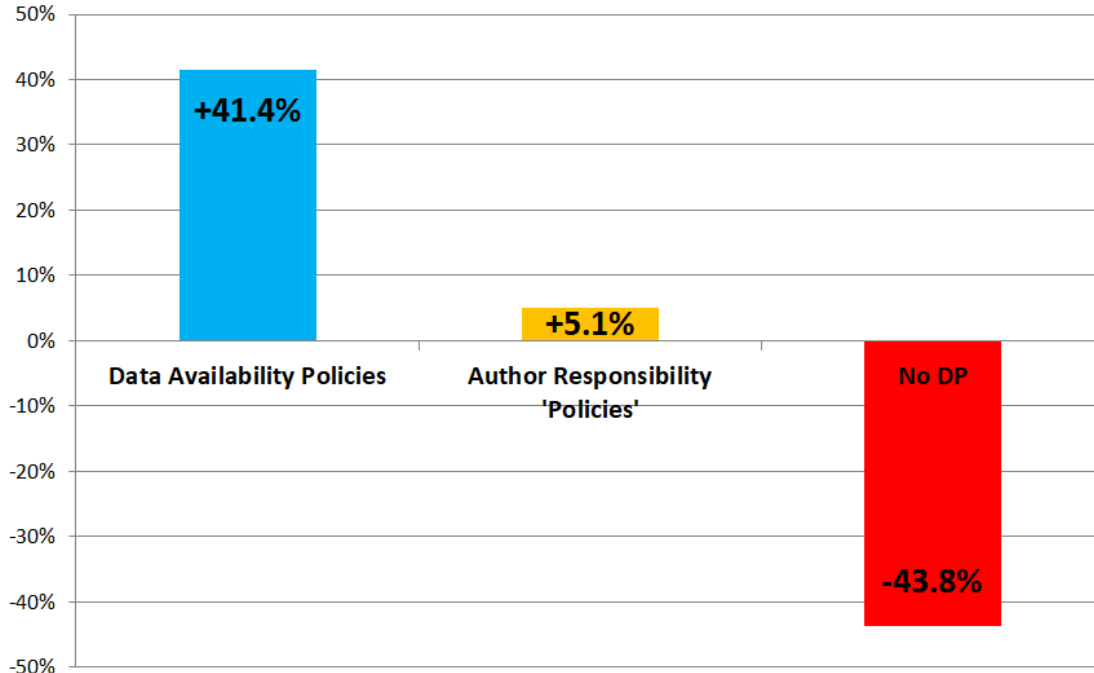
For comparison: A set of 226 impact factor journals listed in the SSCI 2013

4) THE LANDSCAPE IN 2014

4.1 The landscape in 2014 & in 2018*. A comparison

Evolution of journals' data policies between 2014 & 2018

(n=327 for 2018; n=262 for 2014)



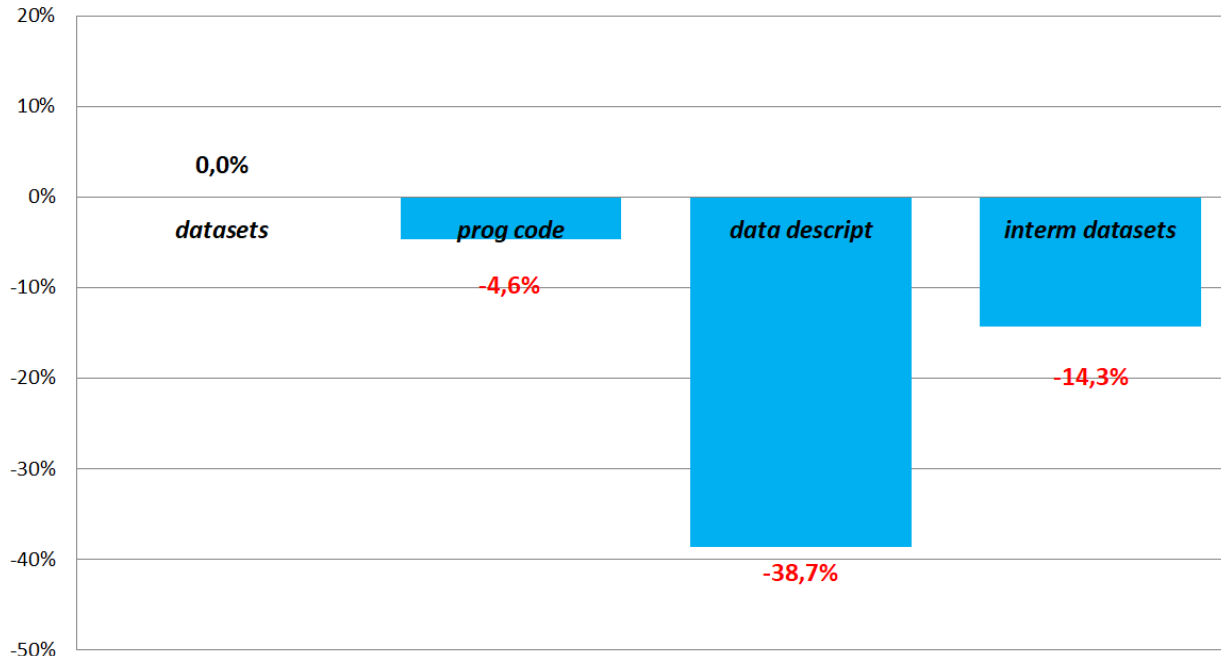
- In the last four years, the amount of journal data policies has massively increased
- But...

** nine journals offered both a DAP and an ARP (in 2018)*



4.2 The landscape in 2014 & in 2018. A comparison (II)

Changes in the policies' specifications between 2014 and 2018
(n=223 for 2018; n=262 for 2014)

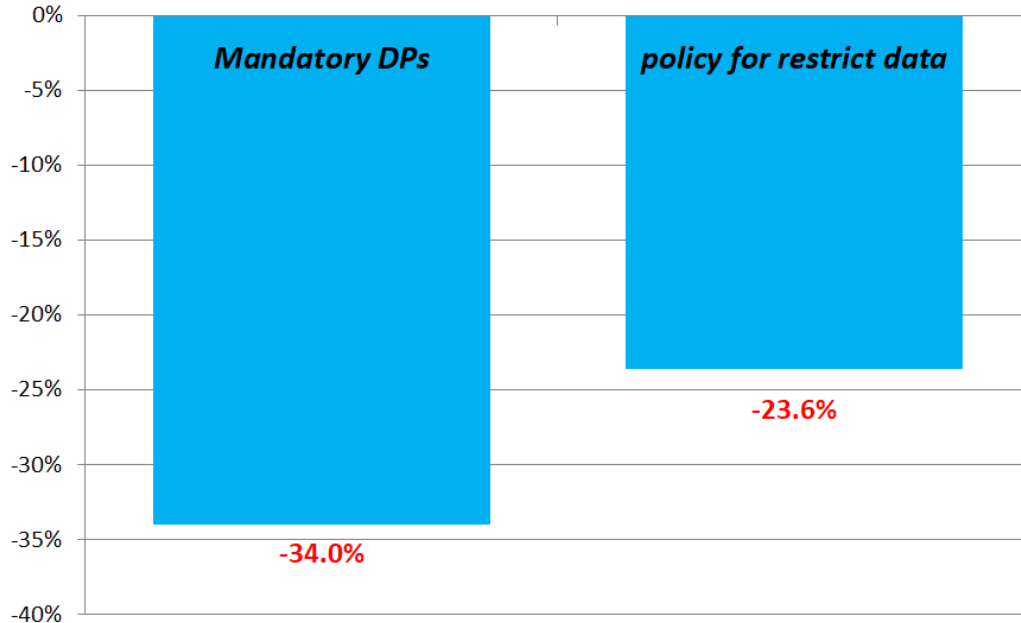


... the policies often fail to describe in detail which information is required to foster reproducible research



4.3 The landscape in 2014 & in 2018. A comparison (III)

Changes in the share of mandatory DPs and policies' procedures in case of restricted data
(n=223 for 2018; n=262 for 2014)



- The share of mandatory data policies has decreased. Many of the new DPs are voluntary now.
 - Also for many of the new policies, a procedure for research based on restricted data is missing
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Wrap-up of the comparison:

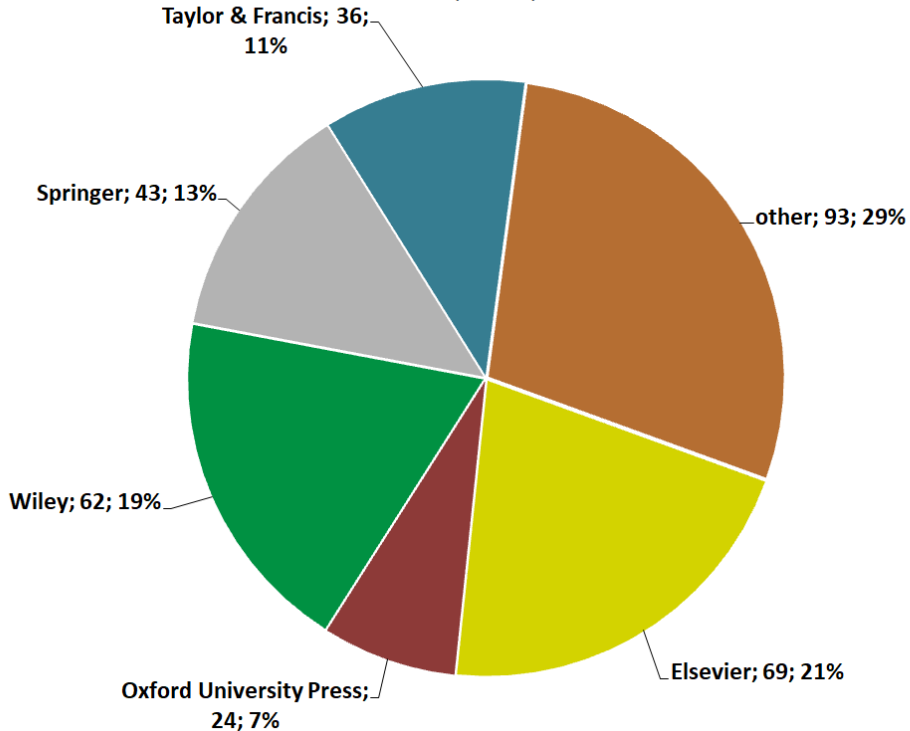
- There has been a massive increase of journals' DPs in the last four years
- But the average quality of these policies has not improved since 2014:
 - Many policies are not very specific, there is a decrease of detail
 - DPs frequently do not mention the information necessary to ensure reproducible research
 - The share of mandatory data policies has decreased
 - Same goes for procedures to ensure reproducibility in case of research based on restricted data
- But there is also good news: The number of solid DPs has slightly increased - eg the DP of the AEA ('the gold standard') is used by ~10%.

5) HOW TO EXPLAIN WHAT HAS HAPPENED?

Some explanations:

Publishing Houses of Journals with emp. Contributions in the JCR ECON 2017

(n=327)



To understand the changes we observe, we have to take a look at the publishers of the journals in the JCR ECON at first



DPs & publishing houses

- These big publishing companies introduced ‘default data policies’ for most of their journals. In 2014 and before, individual DP dominated.
- Some numbers:
 - **Elsevier**: 58 out of 69 journals (84%) employ the publisher’s data policy (partially with slight modifications)
 - **Springer**: All of Springer’s journals now have an ARP which mentions data disclosure on request. 22 out of 43 journals (51%) share (almost) the same DAP
 - **Wiley**: 15 out of the 62 journals (24%) use an identical DP
 - **T&F**: 33 out of 36 journals (92%) roughly share the same DP

How to interpret these changes?

- The increase of journal DPs is based on new practices of the publishing houses
- Most of these new DPs are voluntary and do not provide rules for research based on restricted data

But:

- By addressing data availability, the publishers raise awareness among editorial offices and researchers.
 - Also, these new policies often advise researchers on how data should be cited in a correct way. Often they recommend data repositories for deposit.
 - Open science practices are fostered by this practice - that's a step forward!
-

The future is unwritten!

6) OUTLOOK & DISCUSSION

Outlook & Discussion

- It will be of interest to see whether these changes in publishers' policies will lead to a new practice in handling research data
- By adding recommendations on data citations, recommendations for data deposit and data availability statements, we might expect a changing behaviour from researchers (at least) in these areas
- By addressing these topics we should also expect more discussion and awareness on these aspects among economists (and therefore more questions by researchers). Can we provide the supported needed?

Thank you for your attention!

Now, there is time for questions and comments...

Sven Vlaeminck

ZBW-Leibniz Information Centre for Economics

Neuer Jungfernstieg 21

20354 Hamburg / Germany

[t]:040-42834-415

[@]: s.vlaeminck@zbw.eu

[w]: <http://www.zbw.eu> / www.journaldata.zbw.eu

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