Publishing of working papers during the COVID-19 pandemic: a survey of economics researchers

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ZBW Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre for Economics
gesis Leibniz Institute for the Social Sciences
OASE

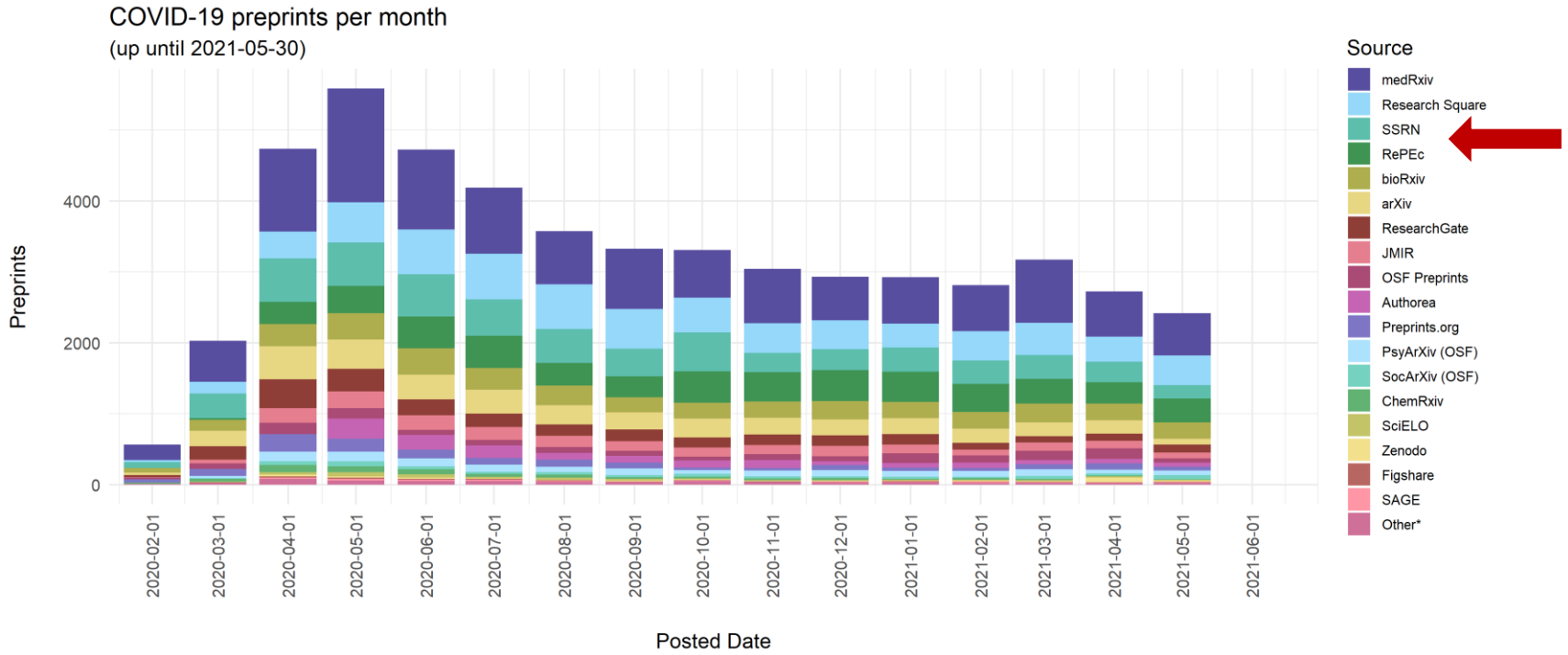
Background

Open **A**cces**S** **E**ffects

Goal: To measure the effects of different Open Access (OA) publishing models on metrics of scholarly impact (citations and altmetrics).

- > Focus on preprints as a form of early OA publications

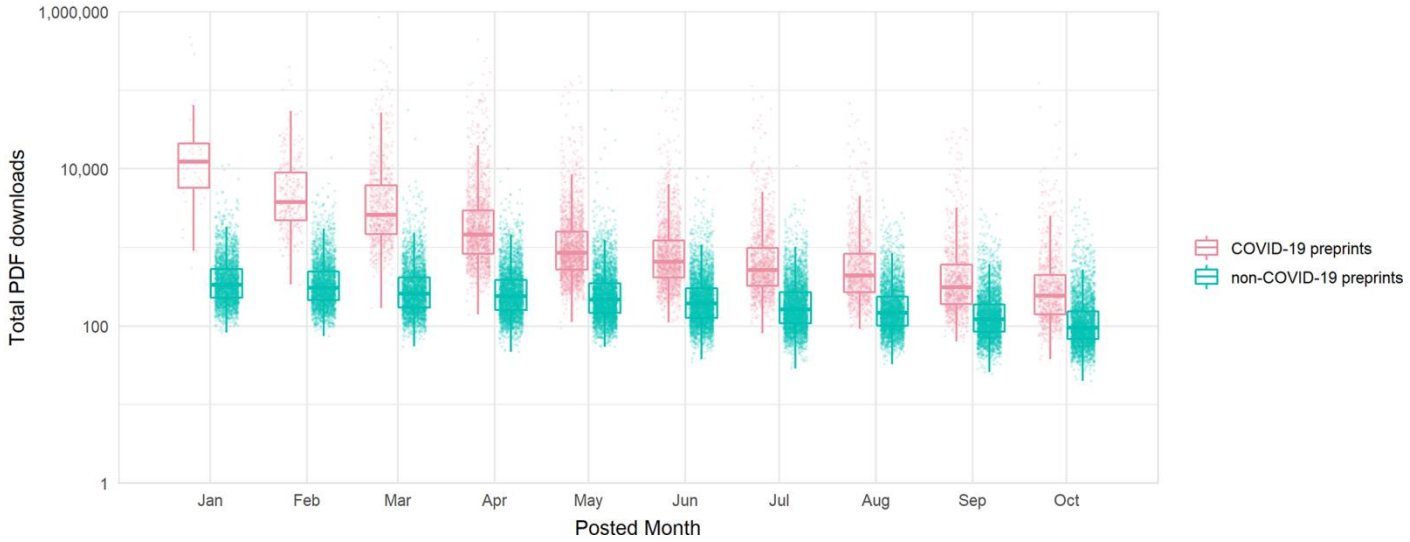
Background



* 'Other' refers to preprint repositories containing <100 total relevant preprints. These include: AfricArXiv (OSF), AgriXiv (OSF), BioHackrXiv (OSF), Cambridge University Press, Copernicus GmbH, EcoEvoRxiv (OSF), EdArXiv (OSF), engrXiv (OSF), ESSOAR, Frenxiv (OSF), INA-Rxiv (OSF), IndiaRxiv (OSF), LawArXiv (OSF), MediArXiv (OSF), MetaArXiV (OSF), NutriXiv (OSF), ScienceOpen, SportRxiv (OSF), Techrxiv (IEEE), WHO.

Background

- Fraser, N., Brierley, L., Dey, G., Polka, J. K., Pálfy, M., Nanni, F., & Coates, J. A. (2021). **The evolving role of preprints in the dissemination of COVID-19 research and their impact on the science communication landscape**. *PLoS biology*, *19*(4), e3000959. https://doi.org/10.1371/journal.pbio.3000959



Research Questions

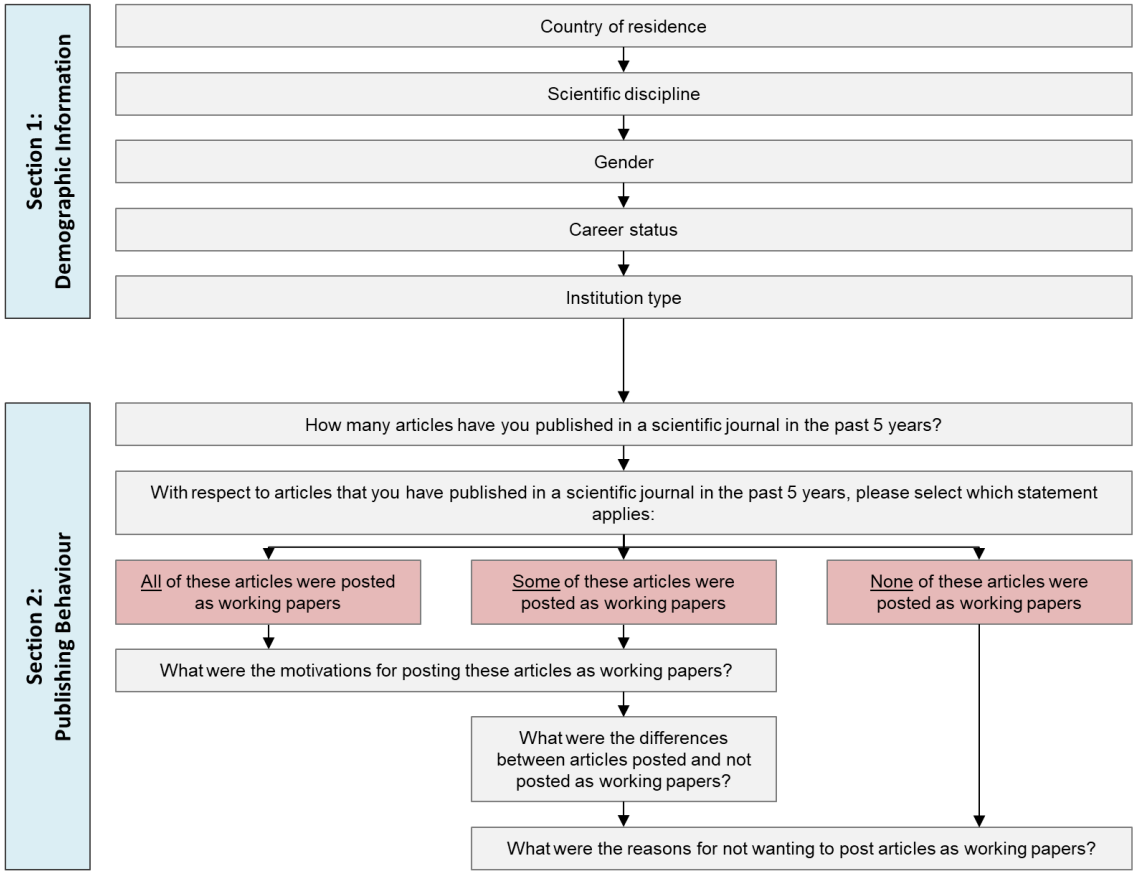
- What motivates Economics researchers to publish their studies as working papers (in comparison to journal articles)?
- What reasons cause Economics researchers to not publish certain studies as working papers?
- Is there a difference in terms of quality/novelty/significance of studies that are published as working papers versus those that are not?
- What effect do these factors have on citations or other metrics of online dissemination?

Survey Methodology

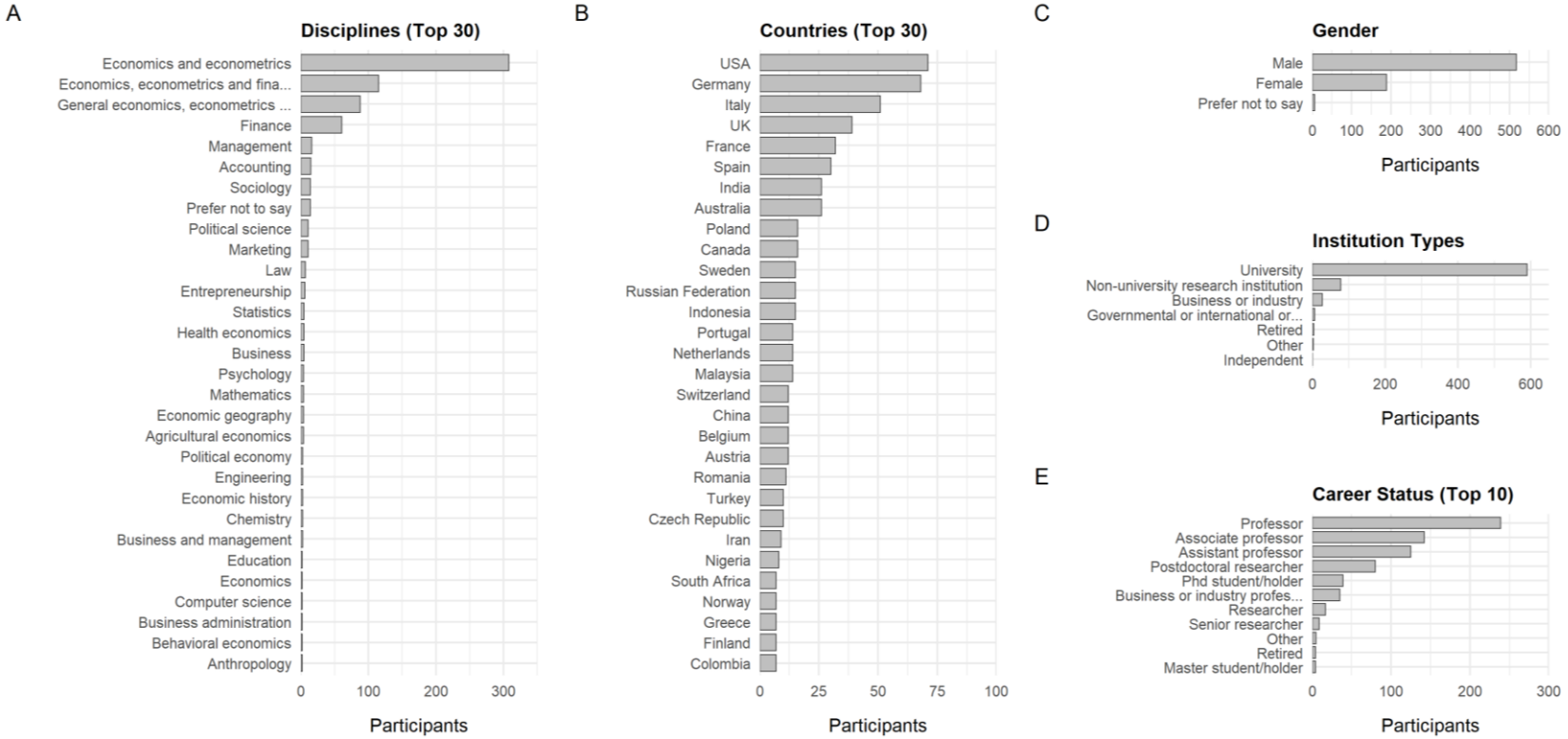
Contacted 19,692 corresponding authors of Economics journal publications, according to three Scopus categories:

- 2000 (General Economics, Econometrics and Finance)
- 2001 (Economics, Econometrics and Finance (miscellaneous))
- 2002 (Economics and Econometrics)

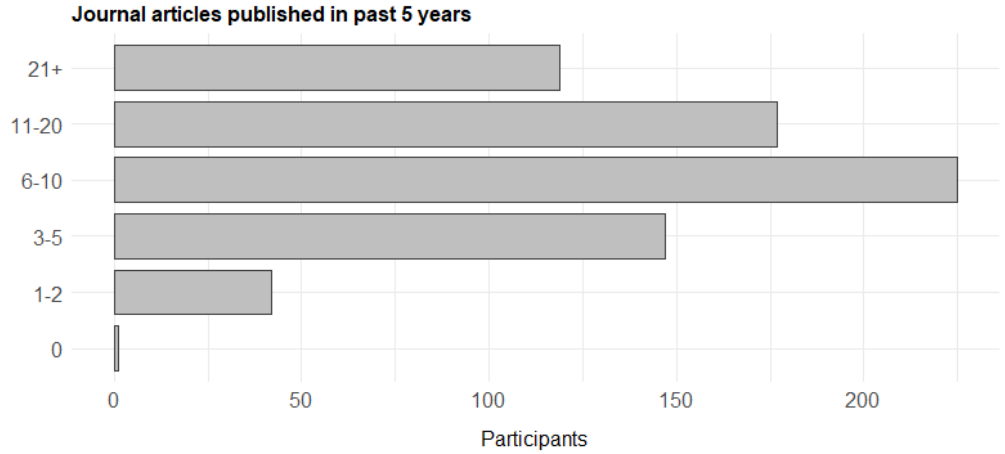
Limited to article document types with publication year 2019

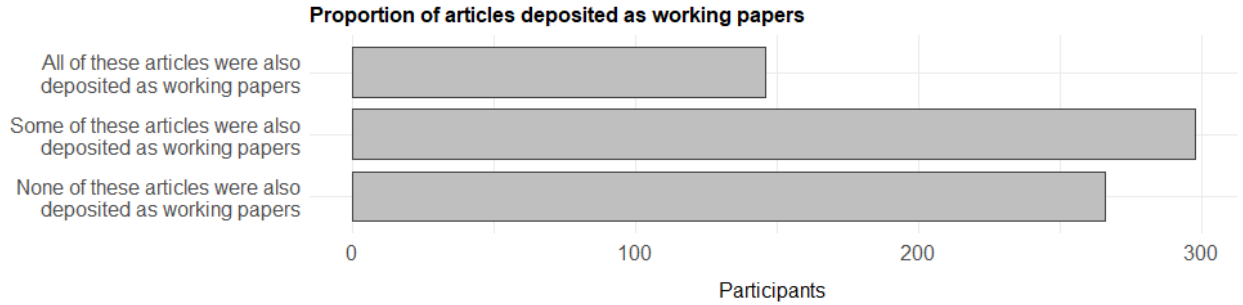


Survey Participants (N = 711, ~4% RR)



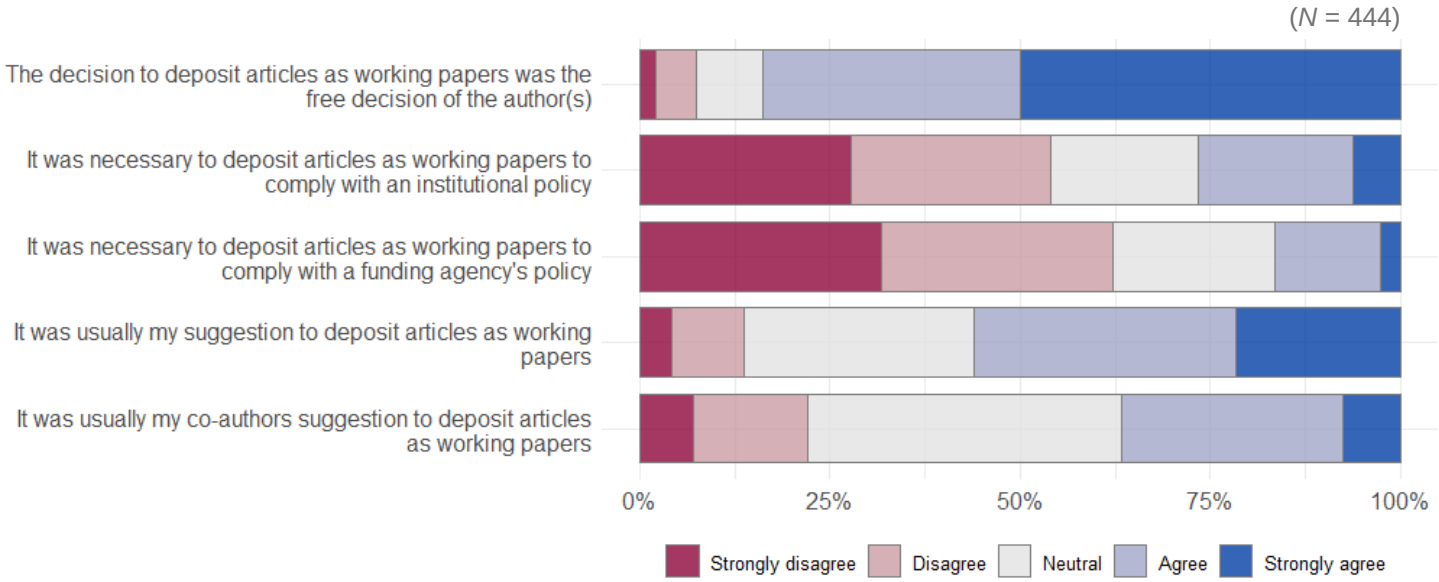
Publishing behaviour





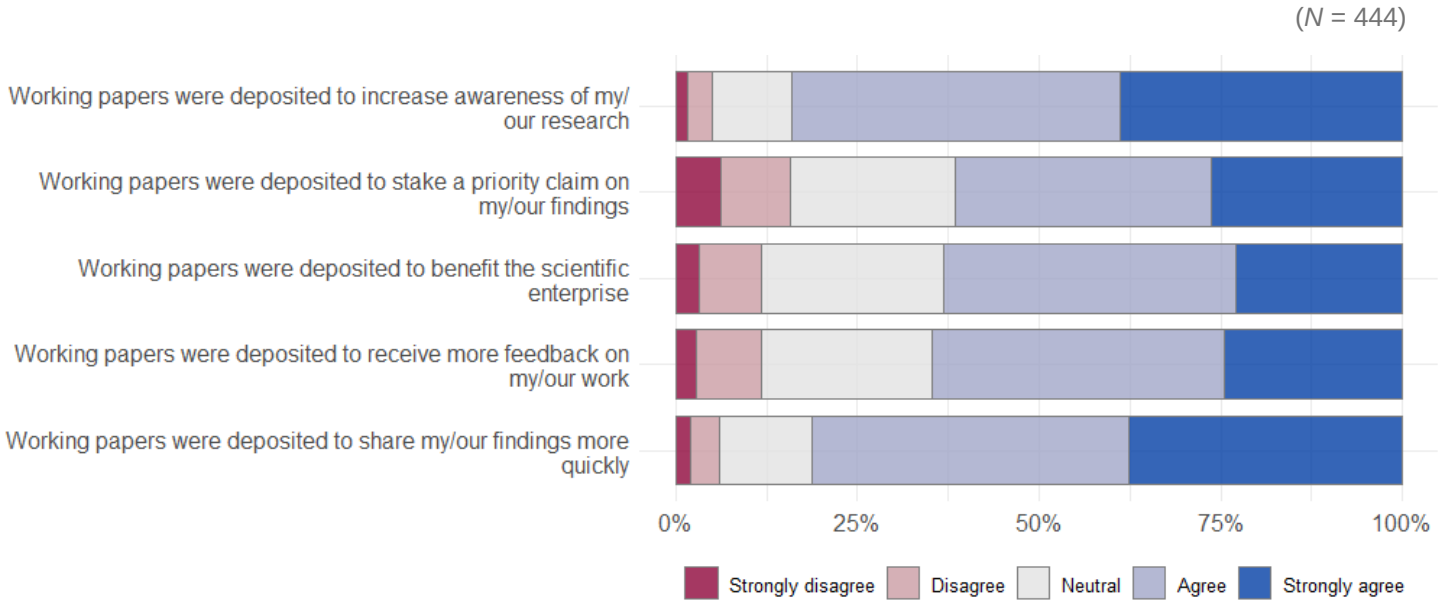
Why do researchers post working papers?

Decision Making



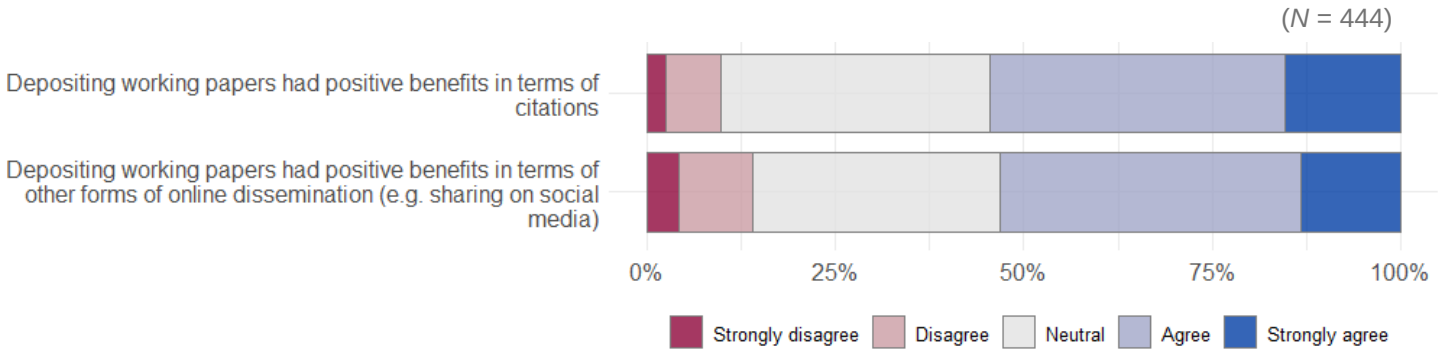
Why do researchers post working papers?

Motivations

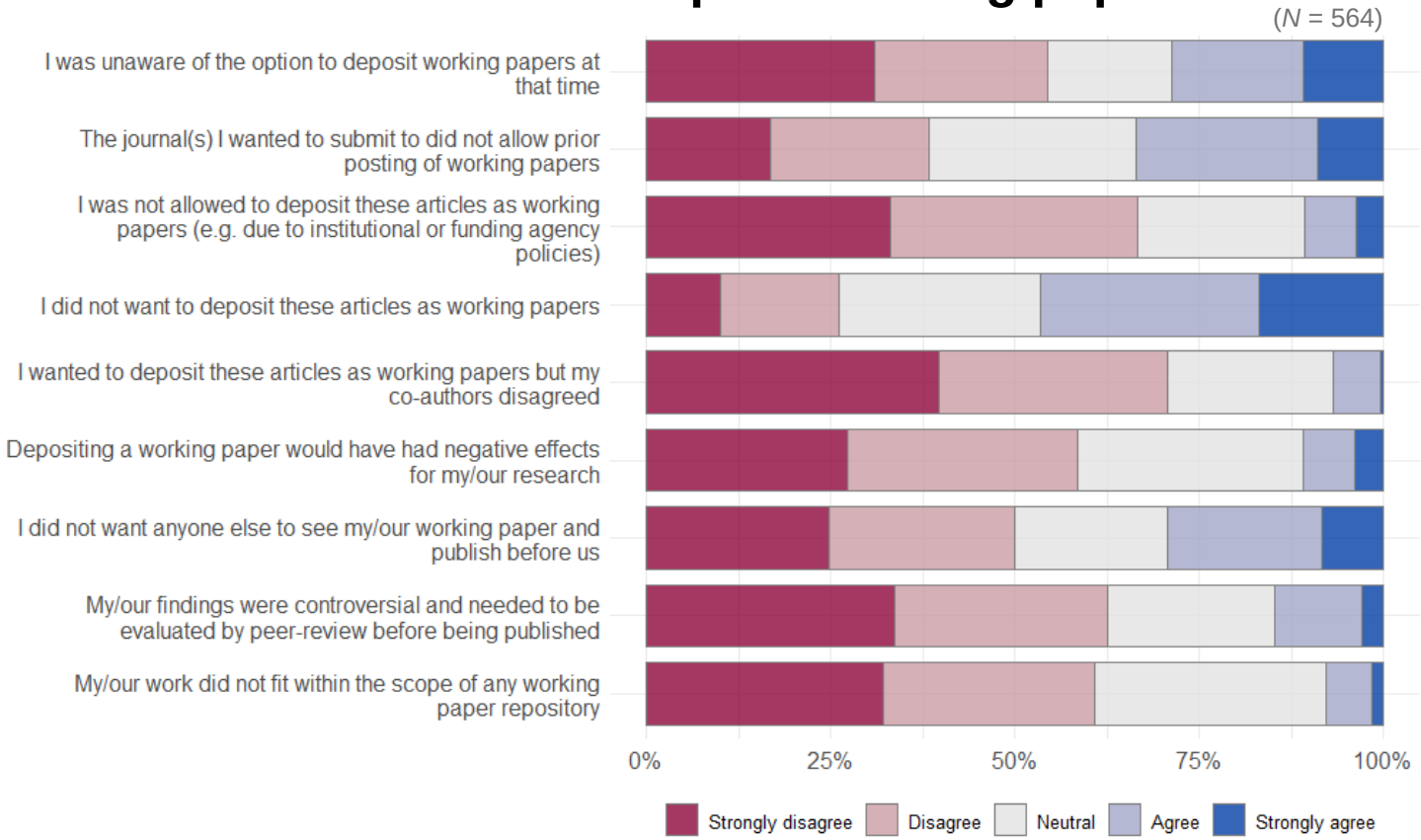


Why do researchers post working papers?

Benefits



Why do researchers choose to not post working papers?



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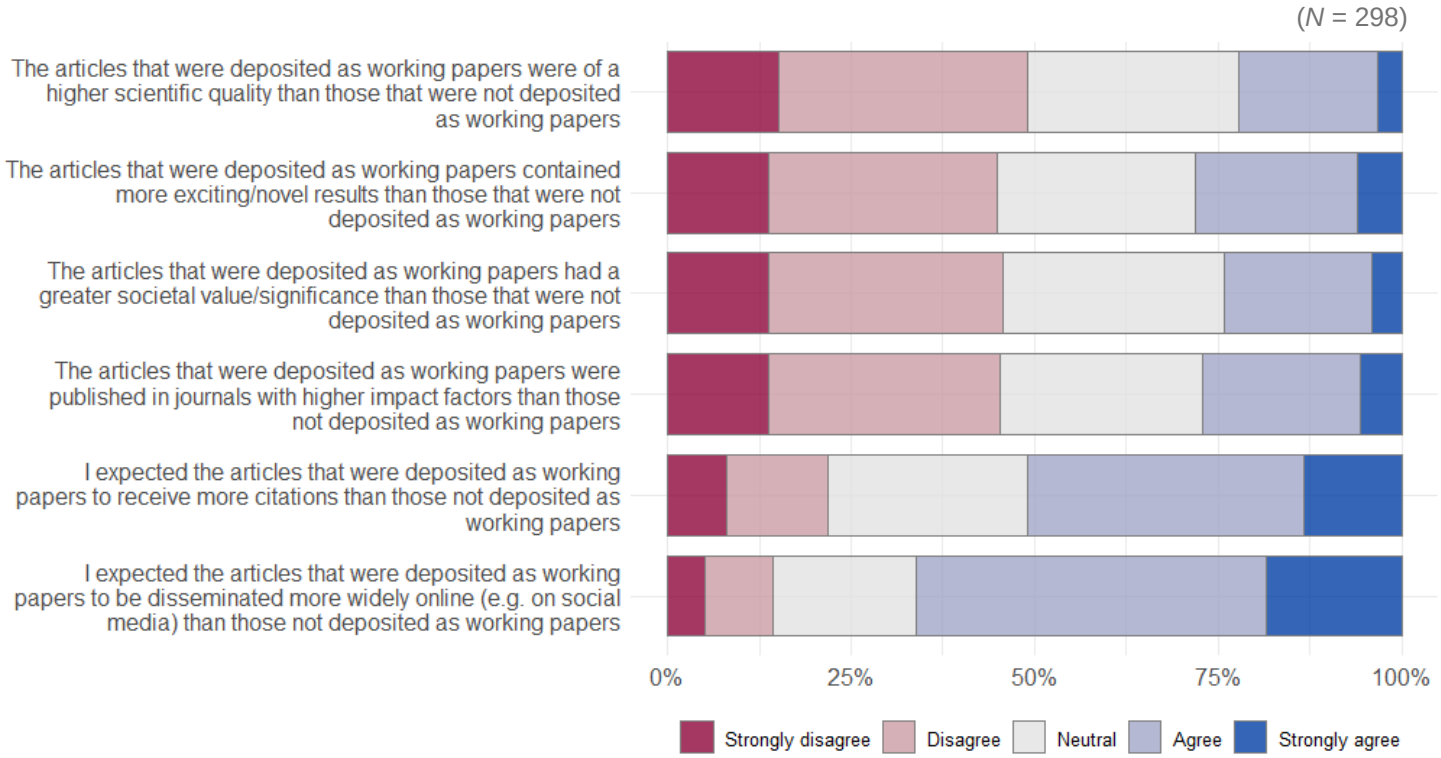
(N = 298)
The articles that were deposited as working papers were of a higher scientific quality than those that were not deposited as working papers
The articles that were deposited as working papers contained more exciting/novel results than those that were not deposited as working papers
The articles that were deposited as working papers had a greater societal value/significance than those that were not deposited as working papers
The articles that were deposited as working papers were published in journals with higher impact factors than those not deposited as working papers
I expected the articles that were deposited as working papers to receive more citations than those not deposited as working papers
I expected the articles that were deposited as working papers to be disseminated more widely online (e.g. on social media) than those not deposited as working papers
0%
25%
50%
75%
100%
Strongly disagree
Disagree
Neutral
Agree
Strongly agree

Conclusions

- Economics researchers who post working papers do it most often to increase the awareness of their work and speed of dissemination.

- Economics researchers generally expect that posting working papers will increase their citation/online dissemination metrics, but we do not find strong support that they specifically choose articles to deposit based on their quality, novelty, or societal value.

- Findings have a high relevance to dissemination strategies of research during COVID-19.

Next Steps:

- Qualitative analysis of free-text responses - add further context to quantitative survey results.

- Comparison of results with surveys conducted in other disciplines contemporaneously with this survey of Economists – how do Economists differ to other disciplines?

Regression results: Decision making

Survey Question	Female	Early Career	non-US
The decision to deposit articles as preprints was the free decision of the author(s)	0.826 (0.531-1.291)	1.358 (0.825-2.264)	0.783 (0.426-1.413)
It was necessary to deposit articles as preprints to comply with an institutional open access/preprint policy	1.264 (0.839-1.904)	0.902 (0.563-1.443)	**2.169 * (1.239-3.851)**
It was necessary to deposit articles as preprints to comply with a funding agency's open access/preprint policy	1.307 (0.87-1.963)	0.956 (0.588-1.549)	**1.929* (1.092-3.455)**
It was usually my suggestion to deposit articles as preprints	0.92 (0.601-1.41)	0.824 (0.517-1.312)	1.053 (0.574-1.934)
It was usually my co-authors suggestion to deposit articles as preprints	0.896 (0.587-1.369)	1.466 (0.909-2.368)	1.156 (0.637-2.093)

Regression results: Motivations

Survey Question	Female	Early Career	non-US
Preprints were deposited to increase awareness of my/our research	0.713 (0.455-1.116)	1.143 (0.701-1.871)	0.558 (0.298-1.027)
Preprints were deposited to stake a priority claim on my/our findings	1.191 (0.782-1.819)	1.132 (0.699-1.839)	0.925 (0.517-1.651)
Preprints were deposited to benefit the scientific enterprise	1.014 (0.657-1.566)	1.094 (0.682-1.758)	**0.546 * (0.302-0.979)**
Preprints were deposited to receive more feedback on my/our work	0.901 (0.589-1.38)	0.681 (0.421-1.101)	1.46 (0.815-2.611)
Preprints were deposited to share my/our findings more quickly	0.664 (0.428-1.03)	0.908 (0.564-1.464)	0.949 (0.517-1.734)
Preprints were deposited to support my or my co-authors career development (e.g. to cite in grant proposals or job applications)	1.135 (0.745-1.731)	1.173 (0.733-1.879)	0.927 (0.513-1.668)

Regression results: Benefits

Survey Question	Female	Early Career	non-US
Depositing preprints had positive benefits in terms of citations	0.703 (0.453-1.087)	0.711 (0.443-1.137)	0.957 (0.522-1.751)
Depositing preprints had positive benefits in terms of other forms of online dissemination (e.g. sharing on social media)	0.837 (0.547-1.282)	0.772 (0.475-1.256)	0.733 (0.408-1.308)

Regression results: Why do researchers not post working papers?

Survey Question	Female	Early Career	non-US
I was unaware of the option to deposit preprints at the time my articles were submitted	**1.755 * (1.236-2.495)**	**1.496 * (1.011-2.217)**	0.997 (0.605-1.648)
The journal(s) I wanted to submit to did not allow prior posting of preprints	**1.599 * (1.132-2.263)**	0.75 (0.511-1.101)	**1.92 * (1.141-3.239)**
I was not allowed to deposit these articles as preprints (e.g. due to institutional or funding agency policies)	**1.418 * (1-2.012)**	0.941 (0.634-1.394)	1.41 (0.848-2.362)
I did not want to deposit these articles as preprints	0.926 (0.654-1.31)	0.734 (0.498-1.079)	0.741 (0.442-1.239)
I wanted to deposit these articles as preprints but my co-authors disagreed	1.164 (0.818-1.654)	1.015 (0.682-1.509)	1.217 (0.729-2.053)
Depositing a preprint would have had negative effects for my/our research	1.318 (0.924-1.881)	**0.632 * (0.425-0.935)**	1.155 (0.684-1.956)
I did not want anyone else to see my/our preprint and publish before us	1.162 (0.822-1.642)	0.886 (0.601-1.304)	0.902 (0.54-1.506)
My/our findings were controversial and needed to be evaluated by peer-review before being published	1.082 (0.76-1.539)	0.958 (0.646-1.419)	**1.795 * (1.069-3.051)**
My/our work did not fit within the scope of any preprint repository	1.216 (0.855-1.728)	0.778 (0.524-1.151)	1.097 (0.655-1.842)

Regression results: Differences

Survey Question	Female	Early Career	non-US
The articles that were deposited as preprints were of a higher scientific quality than those that were not deposited as preprints	1.061 (0.647-1.737)	1.17 (0.661-2.073)	1.07 (0.537-2.131)
The articles that were deposited as preprints contained more exciting/novel results than those that were not deposited as preprints	0.989 (0.607-1.609)	1.371 (0.778-2.418)	0.749 (0.37-1.516)
The articles that were deposited as preprints had a greater societal value/significance than those that were not deposited as preprints	0.878 (0.538-1.432)	0.922 (0.526-1.615)	1.004 (0.506-1.996)
The articles that were deposited as preprints were published in journals with higher impact factors than those not deposited as preprints	0.859 (0.521-1.411)	1.327 (0.754-2.343)	0.986 (0.495-1.965)
I expected the articles that were deposited as preprints to receive more citations than those not deposited as preprints	0.698 (0.424-1.148)	0.784 (0.446-1.38)	1.406 (0.714-2.764)
I expected the articles that were deposited as preprints to be disseminated more widely online (e.g. on social media) than those not deposited as preprints	**0.559 * (0.335-0.932)**	0.706 (0.398-1.256)	1.257 (0.621-2.533)