Pathways from Registration to Publication: Evidence from the AEA RCT Registry

Jessica Leight[1], Viola Asri[2,3], Taisuke Imai[4]

[1]IFPRI [2]Chr. Michelsen Institute [3]University of Konstanz [4]Osaka University

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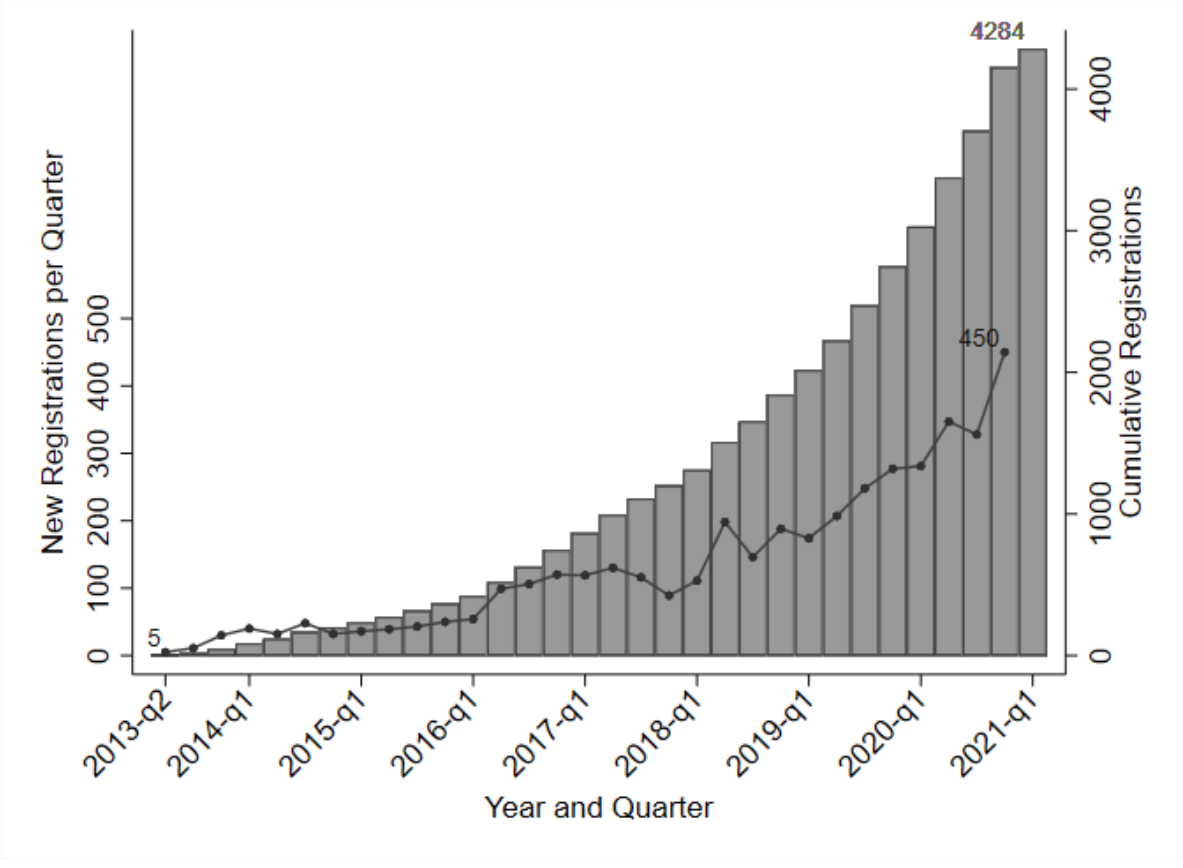
Motivation

- Accelerating trend of pre-registering randomized controlled trials in economics and related fields (e.g., political science)



Publicly available figure produced by Garret Christensen, Edward Miguel, and Sarah Stillman (link).

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- Journals increasingly mandate that every trial be pre-registered
- Scope for publication bias in the opposite direction: some evaluations are preregistered but never published
- Growing evidence around publication bias in economics (Chopra et al., 2024; Brodeur et al., 2023)
- Other disciplines try to correct for missing evidence in meta-analyses but this is still uncommon in economics.
- Potentially valuable source of evidence around this bias: data from trial registries

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This paper

Research questions:

- What share of trials gets published and in what form?
- Which characteristics of trials and of main findings predict publication?

Methods:

- Analysis of a novel data set linking all randomized controlled trials registered in 2023-2016 in the AEA Registry with data on identified research output.
- Carefully code registry data as well as data from published outputs.

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Existing literature

- File-drawer problem (Rosenthal, 1979; Franco et al., 2014; Ensinck and Lakens, 2023)
- Discrepancies between publications and registrations in medical trials (Mathieu et al., 2009; Mathieu et al., 2013; Chauvin et al., 2025)
- Making research protocols automatically available with published output seems to reduce selective reporting of findings (Calmejane et al., 2018)
- Registered reports $\Rightarrow$ more comprehensive reporting of results and associated with higher methodological and analytical rigor in psychology (Soderberg et al., 2021)
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- Main finding: Only 45% of the field experiments published in top economics journals between 2017 and 2021 were pre-registered
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Our study: Universe of RCTs registered in the AEA registry since inception in 2013 until the end of 2016 to examine ...

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Data

- For our analysis, we link public available registry data with self-collected output data
- Registry data: all registrations from 2013-2016: 7% in 2013, 23% in 2014, 23% in 2015, 47% in 2016
- Output data: Tracking all publicly available output of all trials - research assistants search scholarly databases and author websites
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1. Document whether and how trials from the registry get published - descriptive

2. Analyze predictors of any trial output, journal publication and publication in a top-5 journal with the following pre-registered hypotheses:
   - Larger sample size and/or larger number of randomization units (+)
   - Null effects (−)
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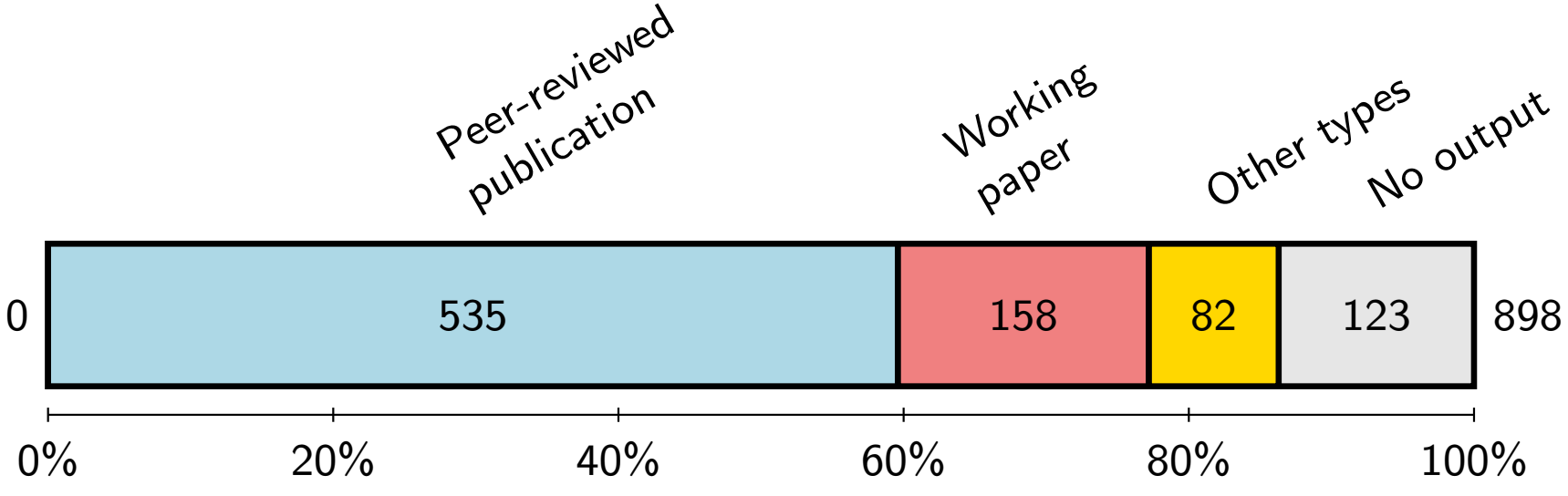
Research output types - distribution

- 1011 trials were registered in 2013-2016
- 898 of 1011 are field RCTs - others are lab experiments, natural experiments, observational studies



About the trials - from the registry

	Mean	Median	SD	N
Clustered design	0.43	0.00	0.50	896
Multi-level clustered design	0.05	0.00	0.21	896
Sample size (in 1000s)	163.53	2.10	3061.97	885
Number of primary outcomes	5.94	4.00	6.84	884

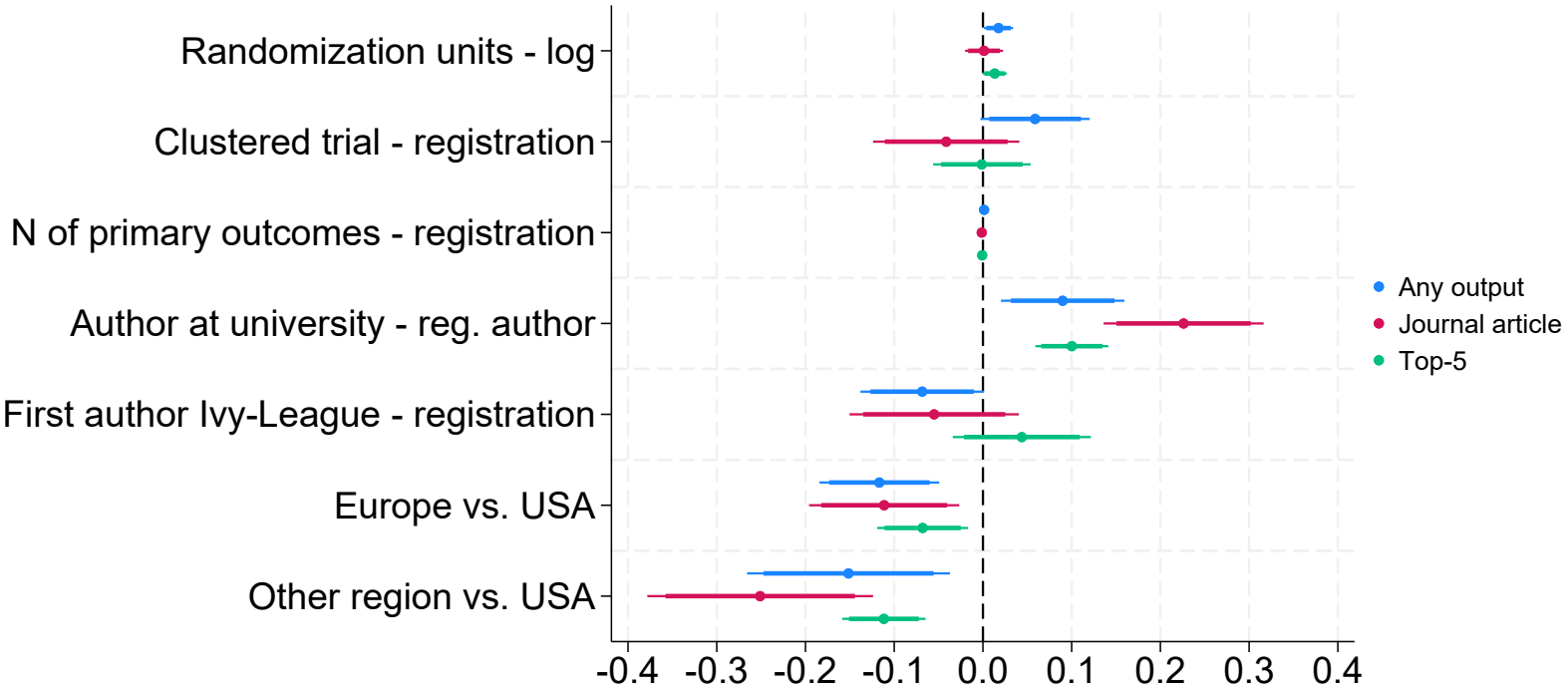
About the authors from the registry

	Mean	Median	SD	N
Number of authors	2.91	3.00	1.43	898
University affiliation - reg. author	0.85	1.00	0.36	898
Ivy League affiliation - reg. author	0.15	0.00	0.35	898
North America - reg. author	0.74	1.00	0.44	898
Europe - reg. author	0.20	0.00	0.40	898

About the research output

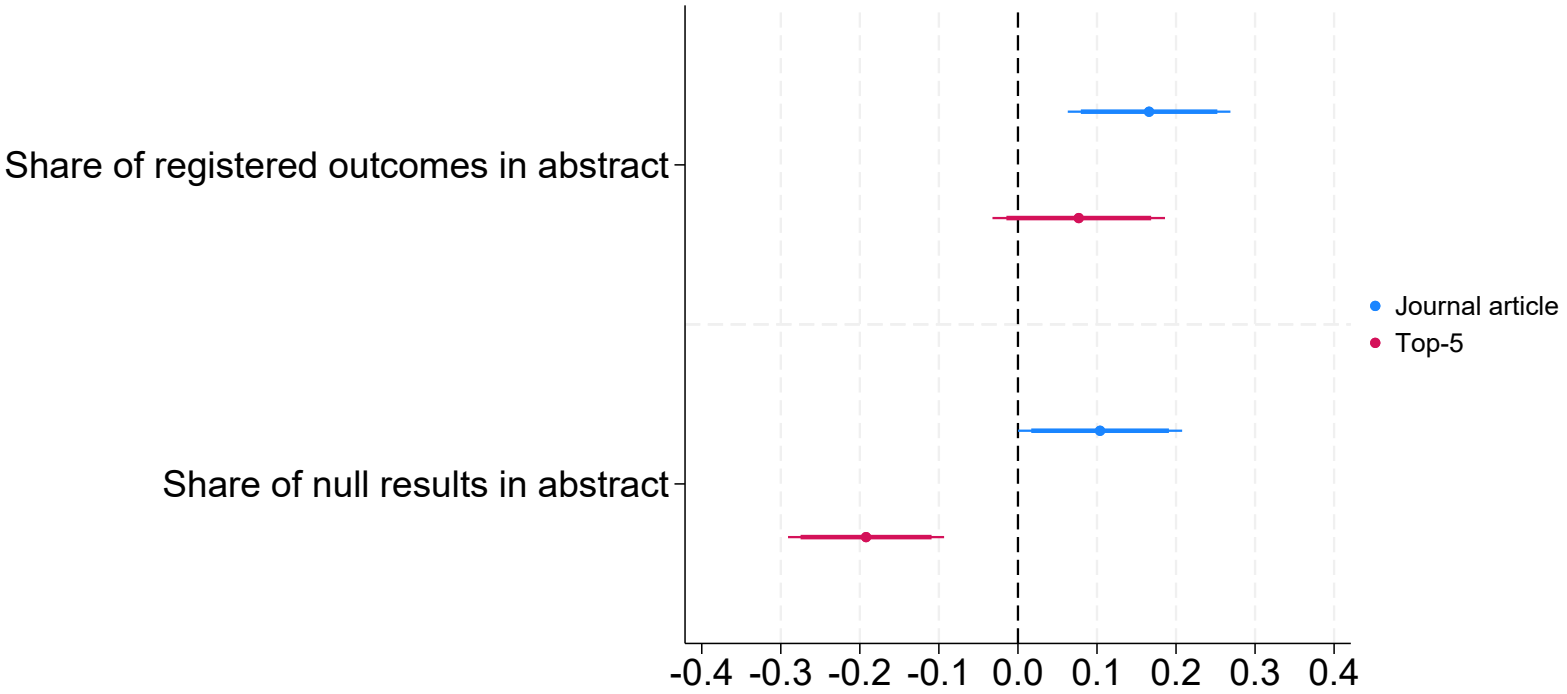
	Mean	Median	SD	N
Number of primary outcomes reported	1.88	1.00	1.45	676
Percentage of registered primary outcomes reported in abstract	0.49	0.40	0.40	673
Number of other outcomes reported in abstract	0.55	0.00	0.00	685
Number of primary outcomes reported as null result in abstract	0.49	0.00	1.14	675
No null results in abstract	0.71	1.00	0.45	670

Predictors of trial outputs - registry



Estimates with 95% and 90% confidence intervals account for year of registration. Same results if we include sample size instead of randomization units (N=879).

Predictors of trial publications - output data



Estimates with 95% and 90% confidence intervals account for year of registration. Same results if we include sample size instead of randomization units (N=667).

Conclusion

- Registry's flexibility - convenient for researchers but huge variation in the quality of registrations - blank/unclear entries.
- Little evidence that trial characteristics significantly predict the probability of research output or journal article.
- Higher probability for studies registered by university authors.
- Higher probability for studies in which authors use outcomes as pre-registered.
- Penalization of null results when it comes to top-5 publications.

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- Finding consistent with the previously documented bias against null results in the publication process
- Meaningful as top-5 publications are influential in hiring and promotion decisions
- How to effectively use research transparency tools to enhance research quality and replicability?
  - Quality check by the registry for important trial details: description of outcomes, clustering, minimum detectable effect size
  - Suggestions to reform the publication system - the potential value of pre-results review (Kasy, 2021; Chopra et al., 2024)

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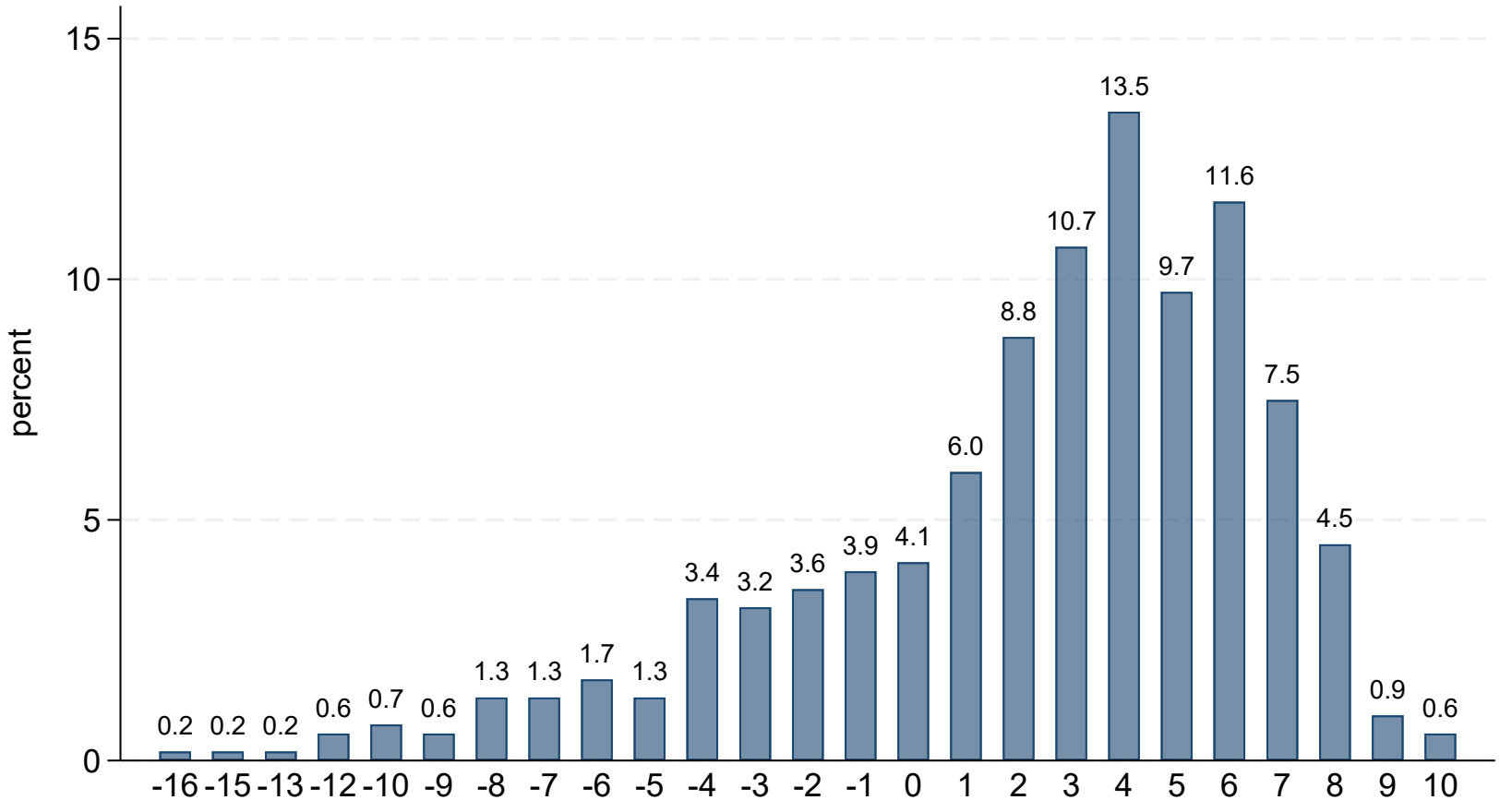
Thank you!

Contact: viola.asri@cmi.no

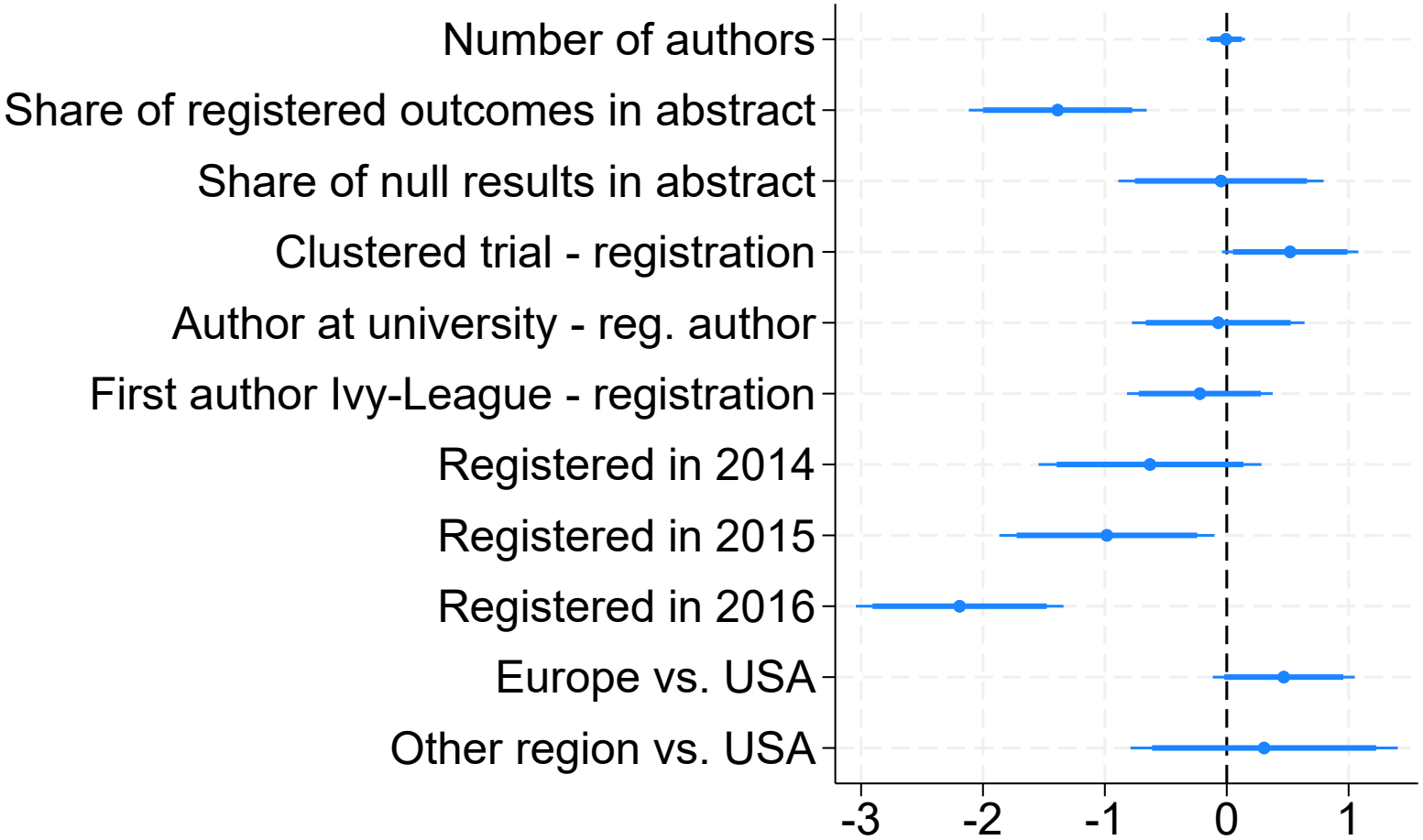
Time from registration to publication

About 22% of the trials were registered after publication, about 26% in the same year or after publication.



Negative numbers indicate that a study was first published as journal article and registered afterwards.
Positive numbers indicate that a study was first pre-registered and published as journal article afterwards (n=532).

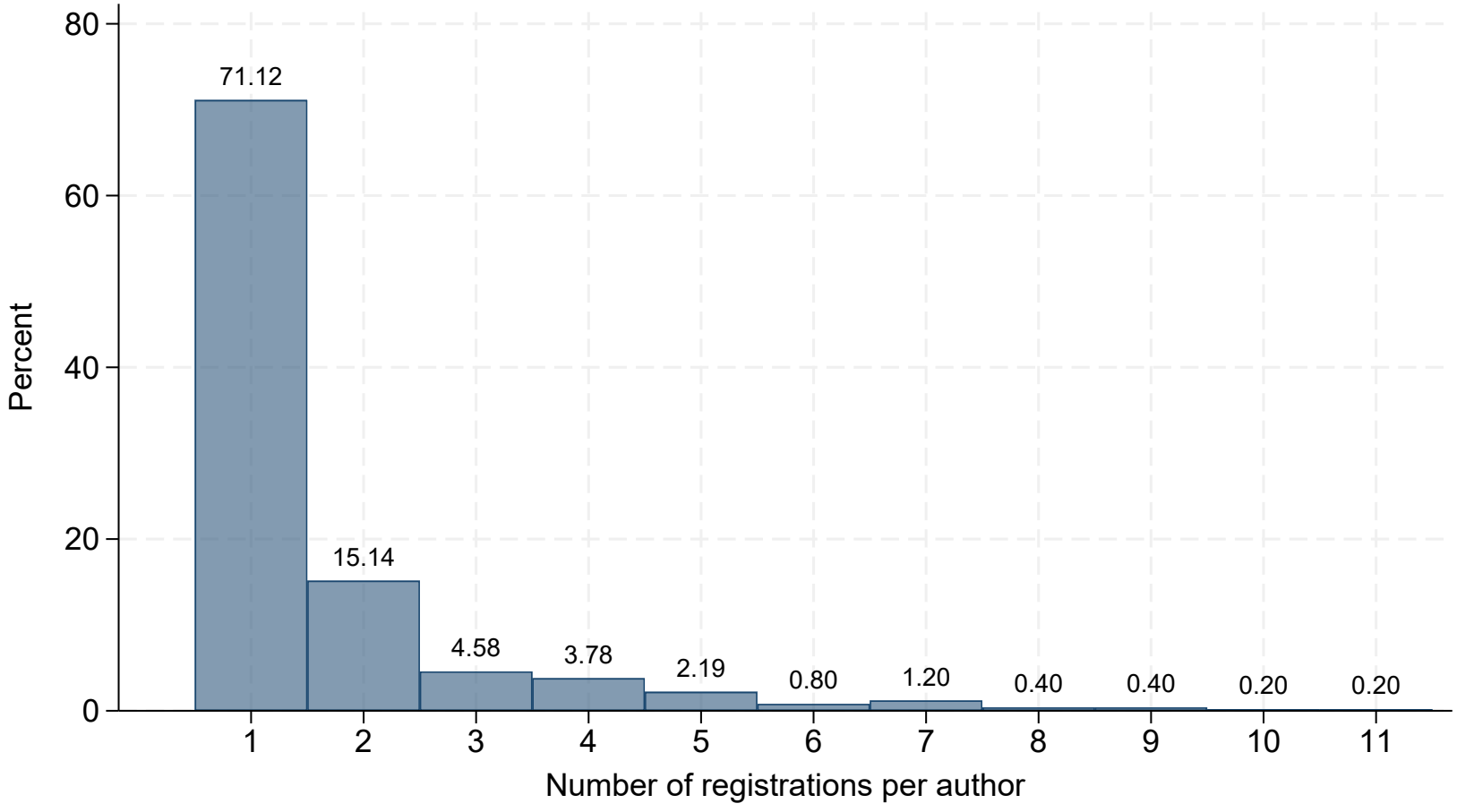
Predictors of time taken from registration to publication



Estimates with 95% and 90% confidence intervals. Same results if we include sample size instead of randomization units. We exclude retrospectively registered trials (N=400).

Number of trials registered per author

Most authors have only one trial registered, but some have many.



Only Esther Duflo and Dean Karlan have more than 11 registrations with 19 and 49 registrations respectively. (n=802)

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