Internet Appendix For "How Has COVID-19 Impacted Research Production in Economics and Finance?"

A. Supplemental analysis with department ranks based on recent publications

The main sample analyzed in the paper consists of tenure track faculty at top-50 U.S. economics and finance departments. Economics rankings are from the October 2020 IEAS/RePEc ranking of U.S. economics departments. Finance rankings are from the Arizona State University (ASU) Finance Research Rankings based on top-4 finance journal publications. In both cases, the rankings are based on all available data as of October 2020. For the finance rankings, the full data includes all publications from 1990 to 2019. For the economics rankings, the full data includes all publication years.

In addition to rankings based on the full data, both sources also provide rankings that are limited to more recent data on publications over the past 10 years. There is an inherent tradeoff in using the full data as opposed to more recent data. The full data produce a less noisy measure of department rank, whereas the recent data may better reflect the current quality of departments that have changed over time. Rankings based on a small number of years include fewer publications, introducing more noise into the rankings. This is unlikely to be a major issue for top-25 departments, but matters more for departments ranked closer to 50 for our main sample and departments ranked closer to 100 in the extended sample. For example, in the 2010 to 2019 U.S. finance department rankings, the rank 48 departments (University of California at Irvine, University of Georgia, and Texas A&M) have only 31 publications, and departments tied for a rank of 97 have only 8 publications. As a result, rankings are highly sensitive to a few publications. Using the full rankings, the cutoff for being in the top 50 departments is 68 publications, and the cutoff for being in the top 100 departments is 19 publications. Faced with this trade-off, we opt to use rankings based on the full data as our baseline.

To check that our results are not sensitive to the choice of which ranking data we use,

we repeat all of our main analysis with alternative rankings based on publications from 2010 to 2019, which are reported in Table IA.3. The more recent rankings change the ranks of some departments and also move a smaller group of departments in and out of the top 50. Table 6 reports department rank results for the more recent rankings. As discussed in the main text of the paper, top-10 departments experienced larger productivity increases, and differential production increases for departments 10–24 are no longer significant with the recent rankings. This change is driven by a higher post-COVID research production increase for departments ranked 26–50 based on recent rankings (0.247 papers per year) compared to the baseline post-COVID research production increase for departments ranked 26–50 based on the full data (0.183 papers per year).

We replicate the other tables in the paper using the recent rankings sample in Tables IA.39–IA.47. Results generally yield similar inferences. The main remaining differences are:

- The associate professor coefficient in Table IA.42 (replicating Table 4) is not statistically significant at the 10% level. However, the point estimate (-0.123) is close to the original value (-0.165).

- The spillover effect for coauthors of women age 35-49 is not significant at the 10% level (see Table IA.45, replicating Table 8). However, the coefficient with the recent rankings data (-0.227) is close to the original coefficient (-0.274).

- In Table IA.46 (replicating Table 9), the coefficient on departments 11–25 is no longer significant (consistent with the results in Table 6 discussed above), and the age 50+ coefficient in column (4) is not significant at the 10% level.

B. Supplemental analysis of citations and downloads

Citations and downloads per paper are highly skewed, with some papers receiving many citations and downloads while others receive very few (see Table 1 for summary statistics). Our baseline citation and download regressions mitigate the influence of outliers by winsorizing at the 5% level. To further account for skewness, Table IA.48 analyzes citation and download data after applying inverse hyperbolic sine transformations, and Table IA.49 repeats the same specifications with median quantile regressions. Results are similar to the baseline paper quality regressions except that citation coefficients are no longer significant in the quantile regressions.

Consistent citations and downloads for papers posted shortly before and after COVID mitigate concerns about changing paper quality. However, the natural accumulation of downloads and citations over time potentially obfuscates this comparison. To address this concern within the full sample of all paper posting dates, we supplement our July 2022 citation and download data with three additional cross-sectional snapshots of SSRN metrics collected in November 2020, April 2021, and August 2021. We also supplement these snapshots with additional historical data collected using the Wayback Machine API. We collect all available snapshots for individuals in our sample, retaining all snapshots that are at least 14 days from each other. Augmenting our four cross-sectional snapshots with this sample results in an unbalanced panel, with which we can better control for life-cycle effects in paper downloads or citations. We estimate OLS regressions with this unbalanced panel of the form:

$$y_{it} = \phi_{q(p(i))} + f(t - p(i)) + \epsilon_{it}., \tag{IA.1}$$

where y_{it} is either downloads or citations of paper i (posted on date $p(i)$) measured at date t. Here, our variable of interest is the vector of indicator variables (ϕ) which map to the quarter that a paper was posted on SSRN. Finally, we flexibly control for potential life-cycle effects with $f(t - p(i))$ which takes on various forms (e.g., n-order polynomial).

Figure IA.11 plots the vector of quarterly fixed effects. Panel A reports coefficients when the outcome variable is the number of paper citations, winsorized at the 5% level. Consistent with the previous analysis, papers posted in the quarter after the onset of COVID have elevated citations, and citations are otherwise similar before and after COVID. This inference holds when controlling for different transformations of the number of weeks since being posted: natural log (red diamonds), 2nd order polynomial (blue cross), and 3rd order polynomial (orange exes). Panel B re-estimates the previous specifications when the outcome variable is the number of paper downloads, with no change after the onset of COVID.

C. Supplemental analysis of coauthor networks

Table IA.32 estimates regressions with alternative network connection measures. Continuous variables are standardized to be mean zero with a variance of one for ease of interpretation. Column (1) Table IA.32 of considers an indicator variable intended to capture individuals with larger networks, defined as having more than the median number of unique coauthors divided by papers, which is 1.5. We divide unique coauthors by papers to ensure the measure is distinct from pre-COVID production. The interaction coefficient (0.23 papers per year) is large and highly significant, indicating that researchers with large networks relative to their prior paper count experienced post-COVID production gains that were 2.4 times as large as researchers with smaller networks.

Column (2) repeats the same network centrality regression reported in Table 9. To check that this relation is driven by network position as opposed to number of coauthors, Column (3) repeats the same regression with network betweenness centrality scaled by the number of unique coauthors a researcher has, with a similar positive result.

In addition to overall connectivity, the diversity of a researcher's connections may also have been important in the fluid research environment generated by COVID. To capture this unique dimension, we propose two metrics designed to measure the diversity in research areas of a researcher's coauthor network. For each researcher, we begin by tabulating the count of each JEL code across their pre-COVID papers which we represent in vector space and normalize such that the vector elements sum to one. There are 763 total JEL codes (yielding a 763-dimensional vector for each researcher), and papers typically include 3 to 4 codes. This analysis is limited to papers that include JEL codes in SSRN, which restricts the sample to 37.1% of papers. Our first measure captures how similar an individual is to his or her coauthors by computing the average cosine similarity in JEL vectors between the author and each coauthor, excluding papers that they coauthored together. For this analysis we restrict the sample to authors with at least two coauthors for whom we can compute JEL

cosine distance, which restrict the sample to 28 thousand author-month observations.

In column (4) of Table IA.32, we assess how similarity to coauthors relates to post-COVID production. The negative and highly significant coefficient indicates that researchers with less diverse networks (e.g., are more similar to his or her coauthors) experienced smaller production gains post-COVID. The –0.21 coefficient implies that a one standard deviation increase in similarity is associated with a 0.21 paper per year post-COVID decrease in research production. Column (5) considers how similar a researcher's coauthors are to one another. Conceptually this differentiates researchers who consistently work with coauthors that share the same field from researchers who work with coauthors who specialize in a variety of fields. Here, rather than computing the similarity between an author and all coauthors, we instead compute the average similarity between all pairwise combinations of the author's coauthors, where similarity is calculated as before. The resulting coefficient on coauthor similarity is once again negative, now significant at the 10% level.

Finally, column (6) jointly includes network size, centrality, and the two similarity measures. With the exception of the second coauthor similarity measure, all of the measures remain statistically significant. This indicates that there is independent support for all of the channels being tested. Table IA.33 repeats the regressions in Table IA.32 using a Poisson regression with similar results, although similarity between coauthors is no longer statistically significant. Overall, researchers that are more central, with broader and more diverse networks experienced higher production gains after the onset of COVID. These network characteristics share the common property that they likely help researchers to quickly start projects on new topics.

D. Supplemental figures and tables

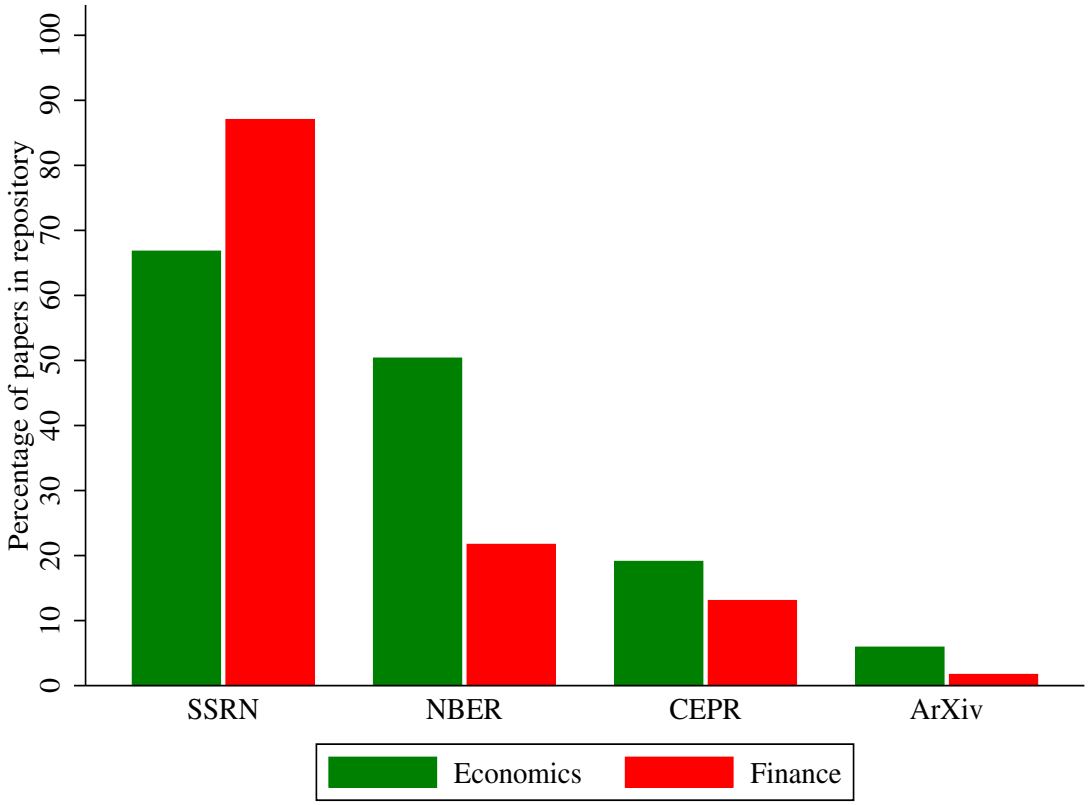


Figure IA.1
Prevalence of online research repositories
This figure plots the use of online research repositories. The figure uses Google Scholar as a benchmark for the set of working papers that an author produces. For a random sample of 200 authors (100 from economics departments and 100 from finance departments), we hand-collect their papers in Google Scholar from January 2019 to September 2021. Next, we identify whether each paper is in SSRN, NBER, CEPR, and ArXiv. The figure displays the resulting matching rate for each repository by field.

(A) Percentage of conference papers posted in SSRN

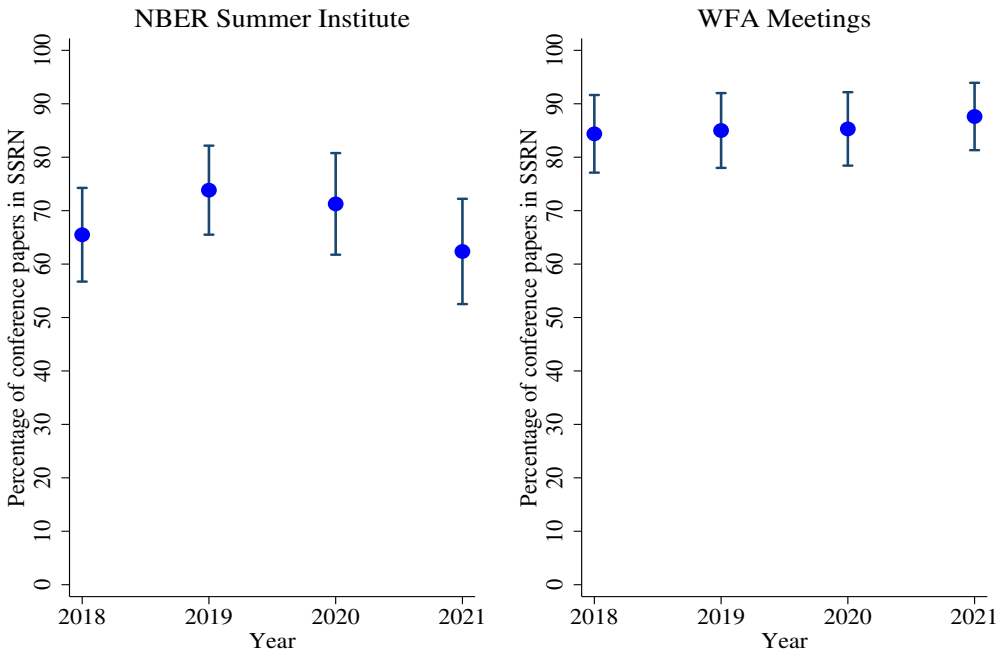
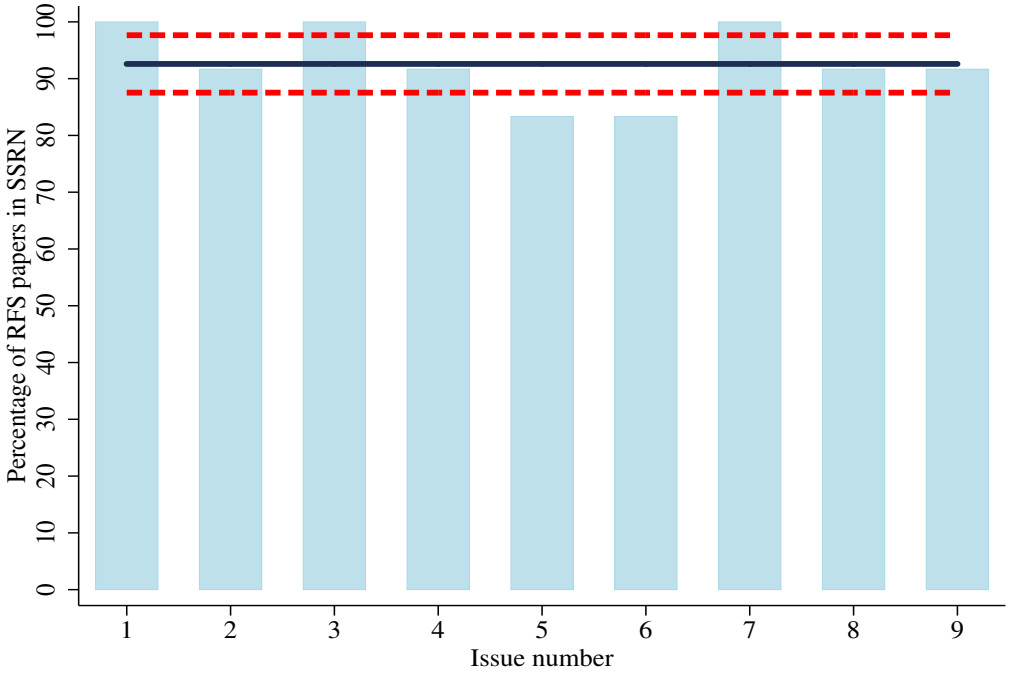


Figure IA.2
Prevalence of SSRN use

Panel A plots the percentage of papers (with 95% confidence intervals) included in the programs of the NBER Summer Institute (left) and the Western Finance Association Meetings (right) that were posted in SSRN, by year. Panel B shows the percentage of papers published in the first nine issues of 2021 at the *Review of Financial Studies* that were posted at SSRN, by issue. The solid line represents the average percentage rate across issues and the dashed line represents the corresponding 95% confidence interval.

(B) Percentage of RFS papers posted in SSRN



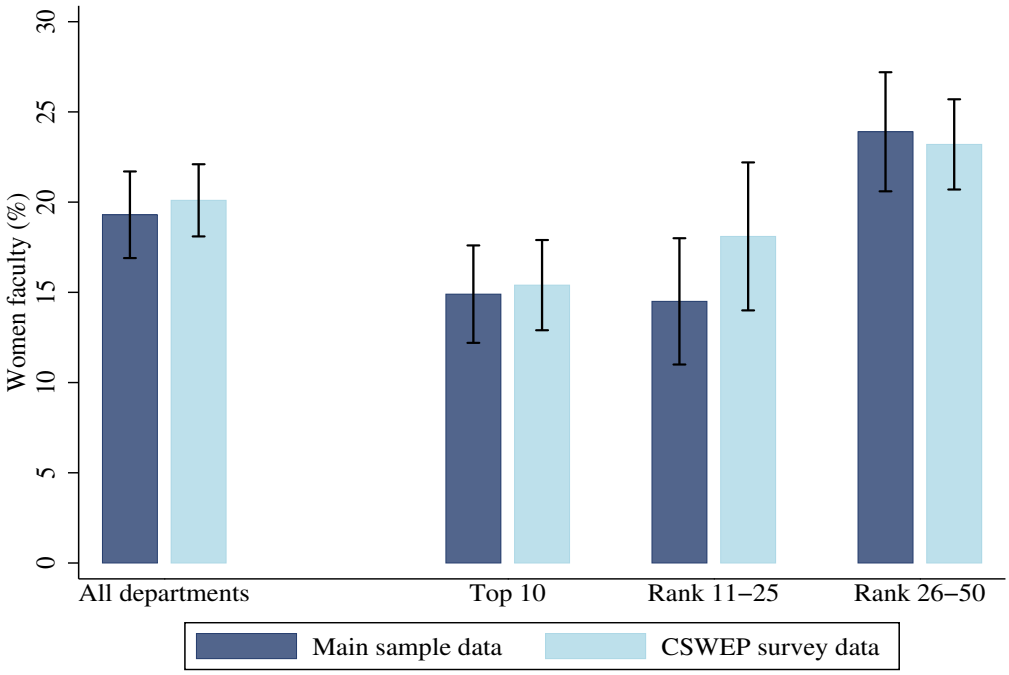


Figure IA.3
Representativeness of the main sample with respect to gender
This figure shows the representativiness of the main sample with respect to gender. The figure plots the mean percentage of women faculty (with 95% confidence intervals) at economics departments in the main Sample (dark bars) and in the Committee on the Status of Women in the Economics Profession (CSWEP) Survey (light bars) in 2020. The plot is restricted to economics departments because the CSWEP does not survey finance departments. The comparison is presented for the full sample and by ranking category.

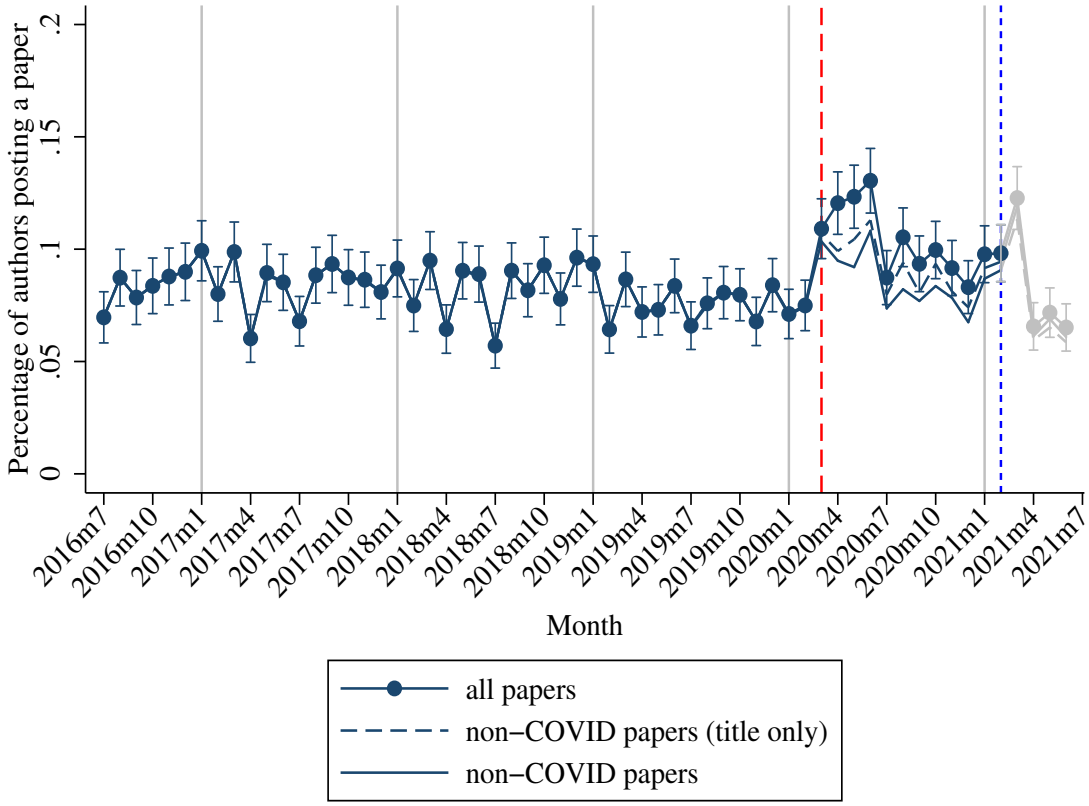


Figure IA.4
Monthly production (percentage of authors posting a paper)
This figure plots the percentage of authors posting at least one paper by month. The solid circles represent the percentage of authors posting a paper when all papers in the sample are considered. The dashed line represents the percentage of authors posting a paper when the papers with COVID-related terms ("COVID," "corona," "SARS-COV-2," and "pandemic") in their titles are excluded. 95% confidence intervals are plotted for all-paper percentages. The solid line represents the percentage of authors posting a paper when COVID-related papers are excluded based on a broader definition that also considers COVID-related terms in the paper's abstract and keywords. The vertical dashed line denotes March 2020 and the vertical dotted line denotes February 2021.

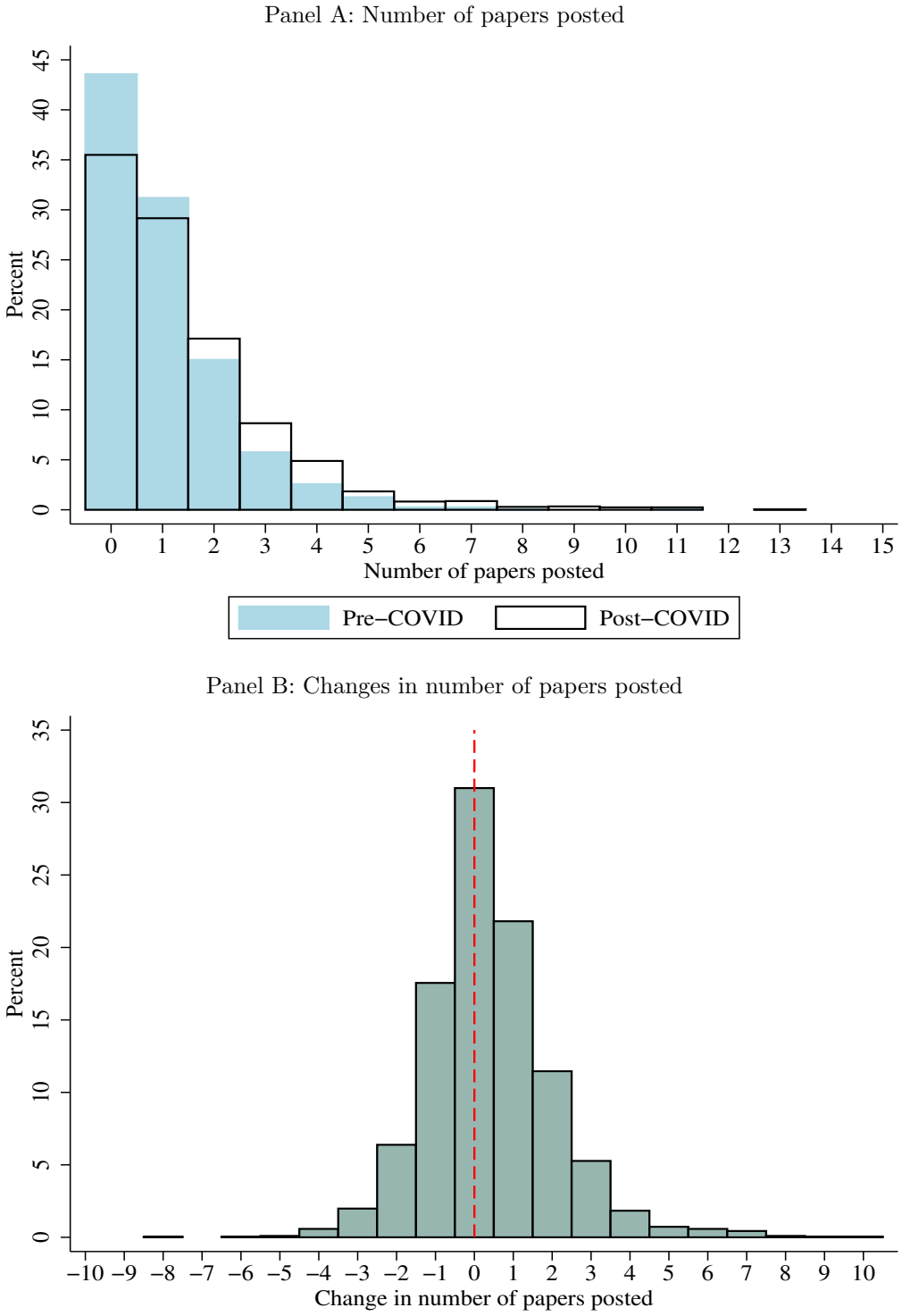


Figure IA.5
Distribution of pre- and post-COVID paper postings

Panel A plots the distribution of the number of papers posted per author during the one year before (solid bars) and the one year after (hollow bars) the onset of COVID (i.e., March 2020). Panel B plots the distribution of the change in the number of papers posted by each author pre- and post-COVID. Specifically, the change in the number of papers posted is defined as the number of papers posted by an author the one year before the onset of COVID minus the number of papers posted by an author the one year after the onset of COVID.

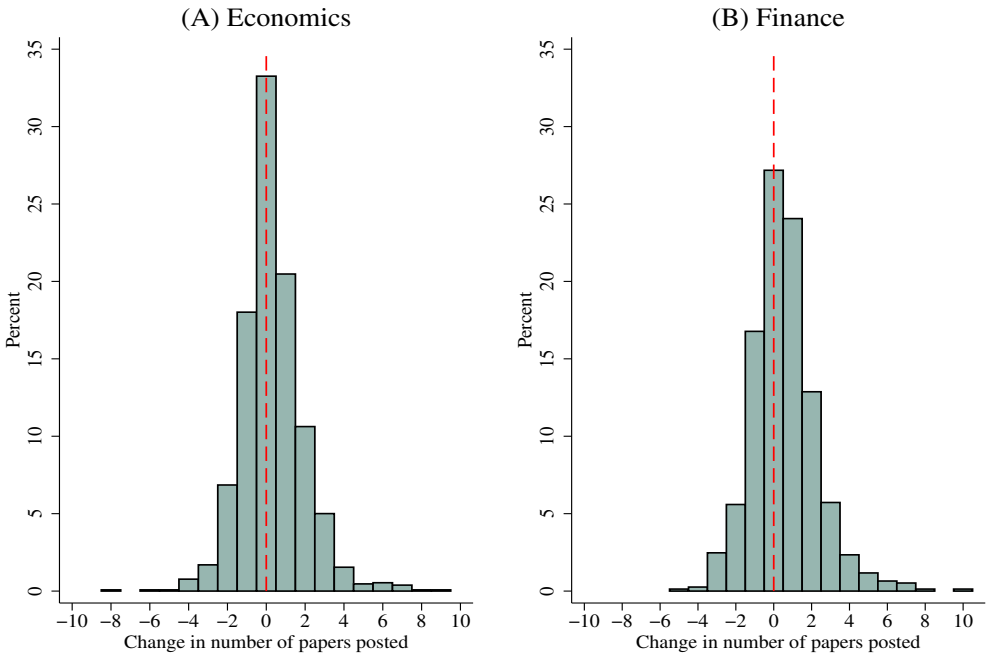


Figure IA.6
Distribution of the change in the number of papers posted pre- and post-COVID by discipline

The histograms plotted in this figure are identical to Panel B of Figure IA.5 except that the author sample is splitted by discipline. The distribution of the change in the number of papers posted by each author pre- and post-COVID for economics faculty is plotted in Panel A whereas the distribution of the change in the number of papers posted by each author pre- and post-COVID for finance faculty is plotted in Panel B.

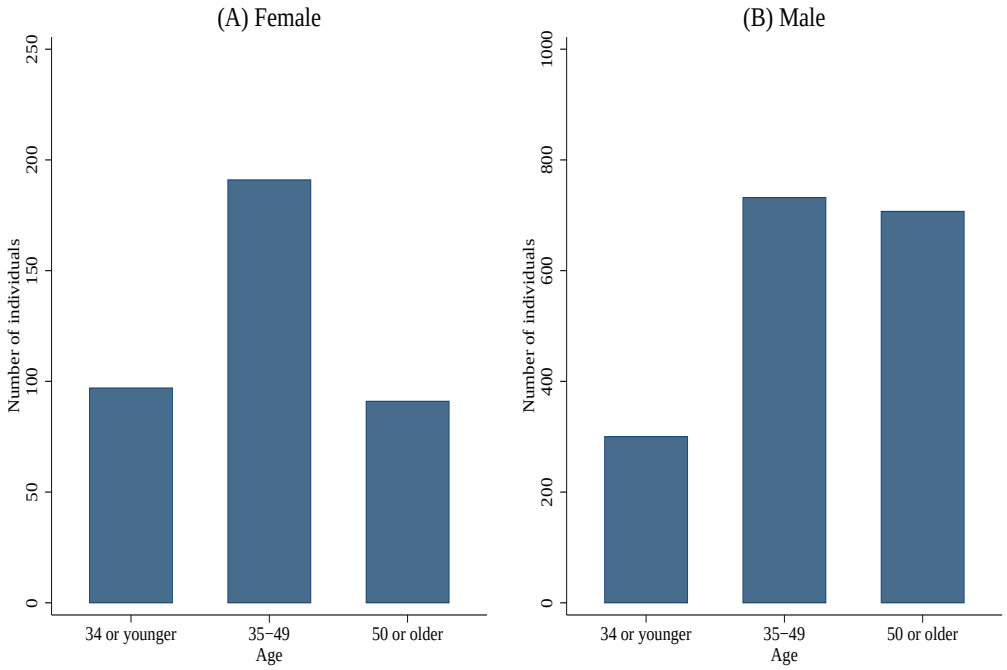


Figure IA.7
Distribution of faculty by age
This figure plots the distribution of faculty across age groups. Panel A shows the distribution for female faculty and Panel B shows the distribution for male faculty.

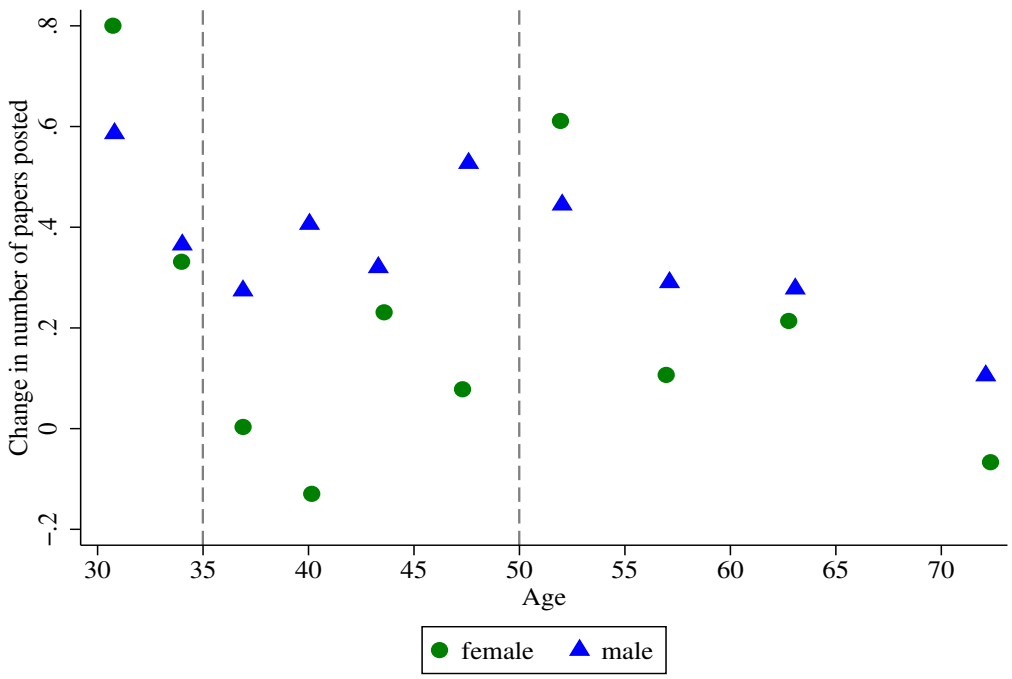


Figure IA.8
Change in the number of papers posted by gender and age
This figure shows bin scatter plots of the post-COVID change in the number of papers posted by female faculty (circles) and male faculty (triangles) by age. The change in the number of papers posted is defined as the average papers per year after COVID minus average papers per year before COVID at the author level.

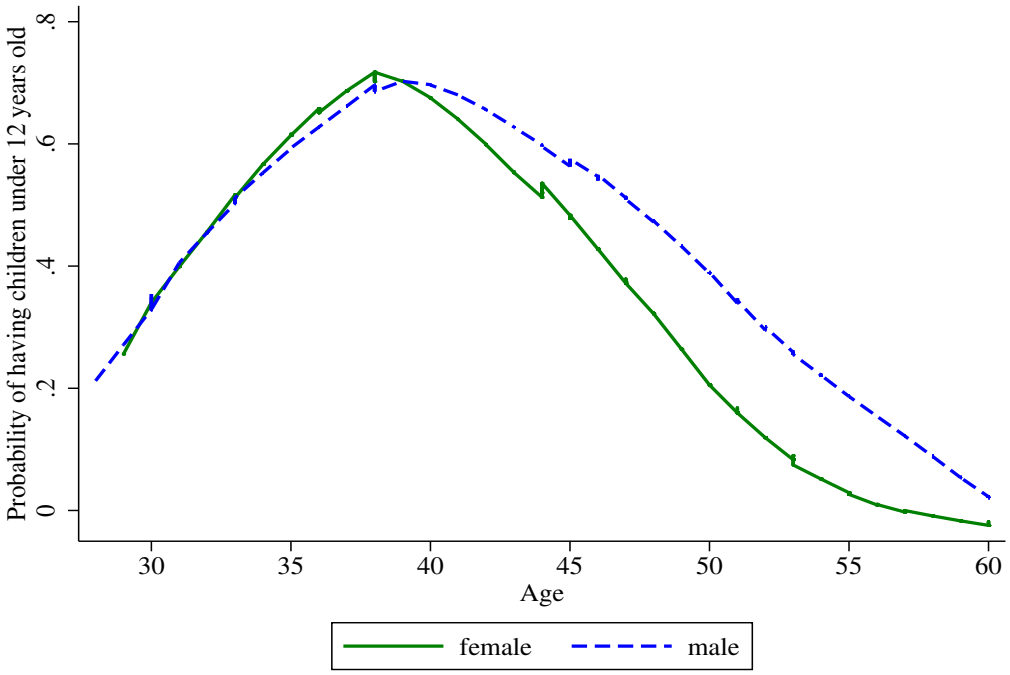


Figure IA.9
Probability of having children under 12 years old by gender and age
This figure plots the probability of having children under 12 years old by gender and age. Probabilities for female faculty are denoted by the solid line and probabilities for male faculty are denoted by the dashed line. The probability of having a young child is estimated using American Community Survey (ACS) data from 2010 to 2020 for individuals reporting an occupation as a "Postsecondary Teacher," holding a doctorate degree, and income of at least $70k. The probability distribution is calculated by performing Lowess smoothing (locally weighted regression) where the outcome is an indicator variable taking on a value of one for individuals with a child under 12 years old.

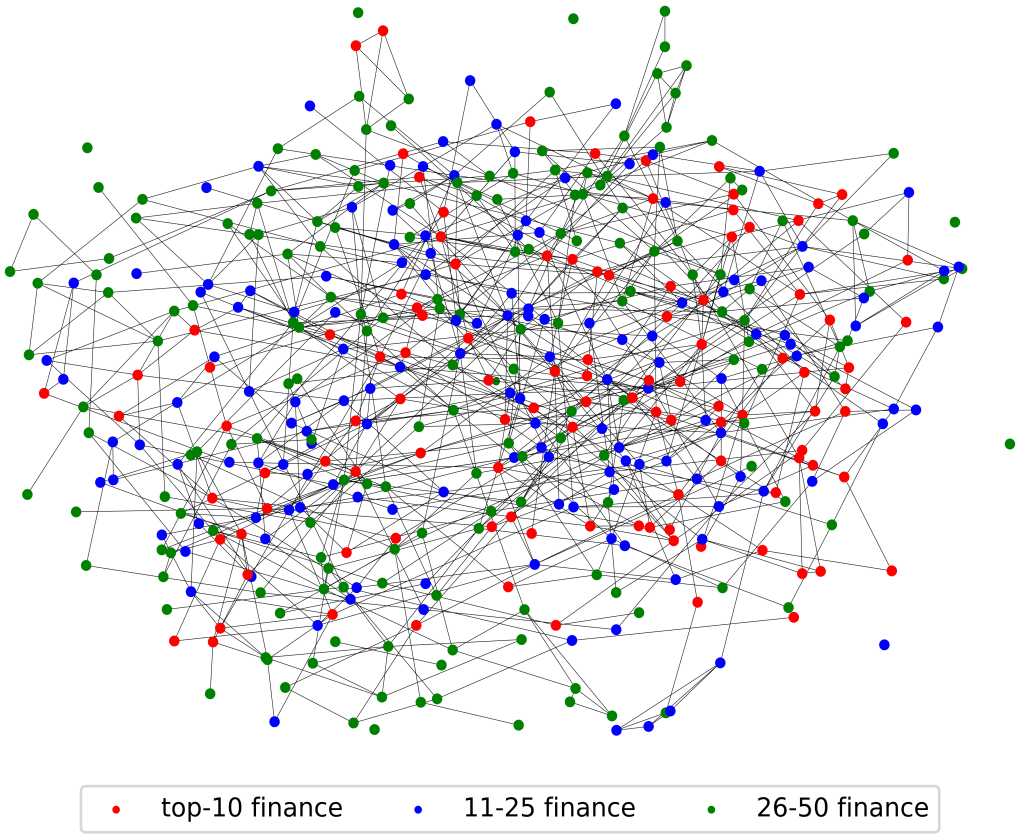
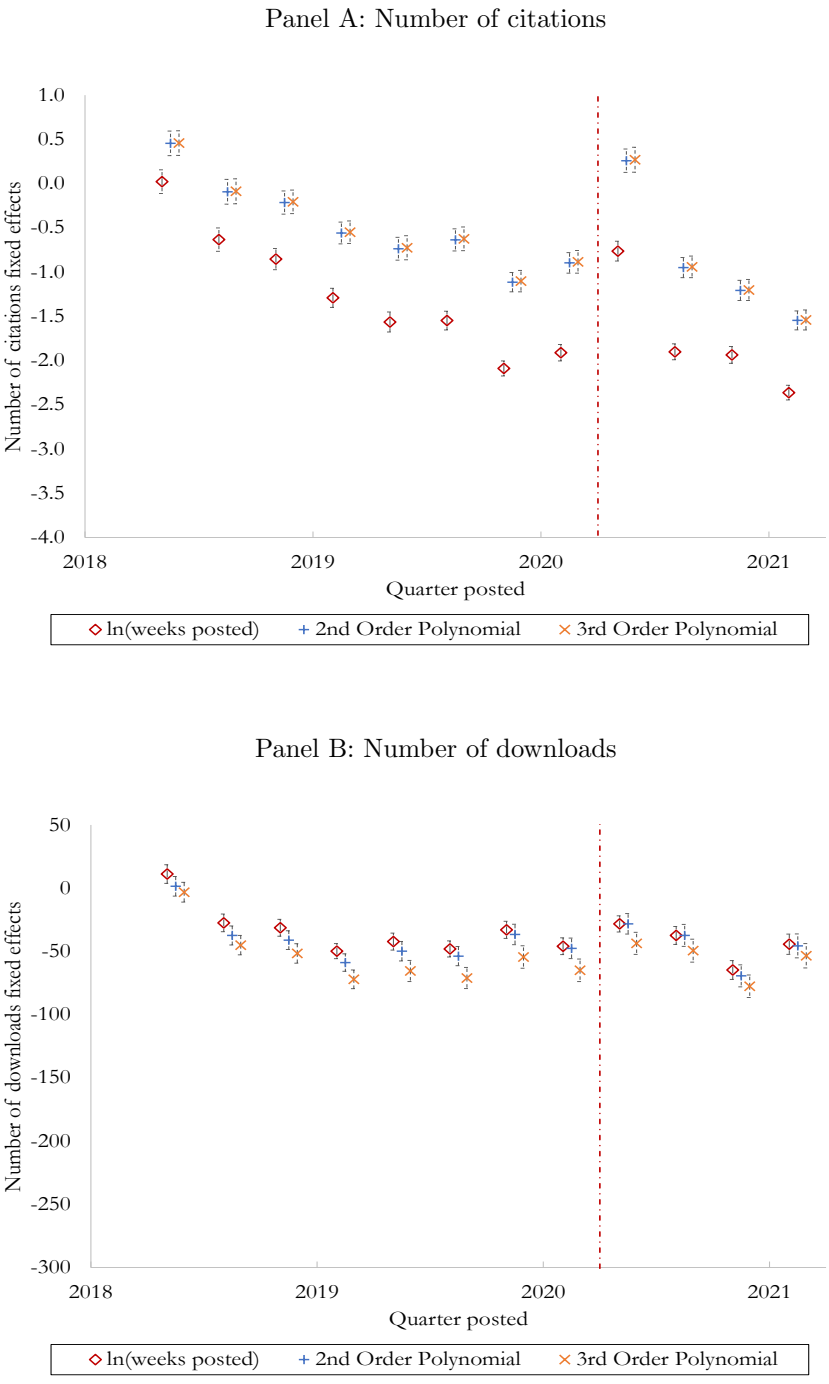


Figure IA.10
Coauthor network structure
This figure plots coauthor relationships between individuals in top-50 U.S. finance departments. Red circles denote individuals at departments ranked 1–10. Blue circles denote individuals at departments ranked 11–25. Green circles denote individuals at departments ranked 26–50. The graph representation is generated from the Fruchterman-Reingold force-directed algorithm with optimal distance between nodes equal to 8 times the square-root of the number of nodes.

Figure IA.11
Citation and download regressions



This figure plots coefficients from OLS regressions where the outcome is the number of citations (Panel A), or number of downloads (Panel B). The sample is an unbalanced panel of paper statistics as of the four snapshots of SSRN metrics collected in November 2020, April 2021, August 2021, and July 2022, supplemented with additional SSRN author page snapshots collected from the Wayback Machine API. The regressions control for the age (*weeks posted*) of a paper as of the snapshot date using different functional forms. The reported coefficients are quarterly fixed effects by paper posting date under alternative functional forms controlling for paper age, including the natural log of *weeks posted* (red hollow diamond), a 2nd order polynomial (blue cross), and 3rd order polynomial (orange x). 95% confidence intervals are plotted using robust standard errors.

Table IA.1
Tenure clock extensions

University Name	Tenure Clock Extension Policy	Gender Neutral Policy	
Arizona State University	not found	not found	
Boston College	not found	not found	
Boston University	yes	yes	[Source Link]
Brown University	yes	yes	[Source Link]
Columbia University	yes	yes	[Source Link]
Cornell University	yes	yes	[Source Link]
Dartmouth College	yes	yes	[Source Link]
Duke University	yes	yes	[Source Link]
Georgetown University	yes	yes	[Source Link]
Harvard University	yes	yes	[Source Link]
Indiana University	yes	yes	[Source Link]
Massachusetts Institute of Technology	yes	yes	[Source Link]
Michigan State University	yes	yes	[Source Link]
New York University	yes	yes	[Source Link]
Northwestern University	yes	yes	[Source Link]
Ohio State University	yes	yes	[Source Link]
Princeton University	yes	yes	[Source Link]
Stanford University	yes	yes	[Source Link]
University of California - Berkeley	yes	yes	[Source Link]
University of California - Davis	yes	yes	[Source Link]
University of California - Los Angeles	yes	yes	[Source Link]
University of California - San Diego	yes	yes	[Source Link]
University of Chicago	yes	yes	[Source Link]
University of Illinois - Urbana/Champaign	yes	yes	[Source Link]
University of Maryland	yes	yes	[Source Link]
University of Michigan	not found	not found	
University of North Carolina - Chapel Hill	yes	yes	[Source Link]
University of Pennsylvania	yes	yes	[Source Link]
University of Southern California	yes	yes	[Source Link]
University of Texas - Austin	yes	yes	[Source Link]
University of Washington - Seattle	yes	yes	[Source Link]
University of Wisconsin - Madison	yes	yes	[Source Link]
Washington University in St. Louis	not found	not found	
Yale University	yes	yes	[Source Link]

This table shows which U.S. universities implemented COVID-related tenure clock extensions. The table is based on online available information and is restricted to universities with economics or finance departments ranked 25 or higher in the ranking in Table IA.**2**. A link to the relevant websites discussing the tenure clock extensions is provided in the third column.

Table IA.2
Top-50 U.S. economics and finance departments

	Economics Departments		Finance Departments
1	Harvard University	1	New York University
2	Massachusetts Institute of Technology	2	University of Chicago
3	University of California - Berkeley	3	Harvard University
4	University of Chicago	4	University of Pennsylvania
5	Princeton University	5	University of California - Los Angeles
6	Stanford University	6	University of Michigan
7	Columbia University	7	Duke University
8	Brown University	8	Massachusetts Institute of Technology
9	Yale University	9	Columbia University
10	New York University	10	Ohio State University
11	Boston University	11	Northwestern University
12	University of Pennsylvania	12	Stanford University
13	Dartmouth College	13	Cornell University
14	University of California - San Diego	14	University of Texas - Austin
15	Northwestern University	15	University of North Carolina - Chapel Hill
16	University of California - Los Angeles	16	Boston College
17	University of Michigan	17	University of Southern California
		18	University of California - Berkeley
19	Boston College	19	University of Illinois - Urbana/Champaign
20	University of Southern California	20	University of Maryland
21	University of California - Davis	21	Indiana University
22	University of Wisconsin - Madison	22	Arizona State University
23	Michigan State University	22	University of Washington - Seattle
24	Duke University	24	Washington University in St. Louis
25	Georgetown University	25	Yale University
26	Vanderbilt University	26	Purdue University
27	University of Maryland	27	University of Rochester
28	University of California - Irvine	28	University of Utah
29	Cornell University	29	University of Notre Dame
30	Pennsylvania State University	30	Emory University
31	Arizona State University	31	University of Minnesota
32	Stern School of Business, New York University		
33	University of Texas - Austin	33	University of Georgia
34	University of California - Santa Barbara	34	University of Florida
35	University of Virginia	35	Pennsylvania State University
36	Johns Hopkins University	36	Carnegie Mellon University
37	Rutgers University	36	Dartmouth College
38	University of Notre Dame	36	University of Virginia
39	Ohio State University	39	Michigan State University
40	Washington University in St. Louis	39	Southern Methodist University
41	University of Minnesota	41	Rutgers University
42	University of Colorado	42	Vanderbilt University
43	University of California - Santa Cruz	43	University of Arizona
44	Georgia State University	43	Georgetown University
45	George Washington University	45	Rice University
46	Williams College	46	University of Iowa
47	University of Washington	47	Georgia State University
48	Texas A&M University	48	University of Houston
49	University of Pittsburgh	49	University of Wisconsin - Madison
50	California Institute of Technology	50	Baruch College
		50	Texas A&M University

This table shows the list of top-50 U.S. economics and finance departments as of October 2020. Economics department rankings are from the IDEAS/RePec ranking of U.S. economics departments based on publications in all years. Finance department rankings are from the Arizona State University (ASU) Finance Research Rankings based on top-4 journal publications from 1990 to 2019. The Columbia GSB Economics and Finance department (ranked 18) is not included in the economics departments because it includes both economics and finance in the IDEAS/RePec rankings. Princeton finance (ranked 32) is not included in the finance departments because Princeton does not have a finance department.

Table IA.3
Economics and finance departments (alternative rankings)

	Economics Departments		Finance Departments
1	Harvard University	1	New York University
2	Massachusetts Institute of Technology	2	Harvard University
3	University of California - Berkeley	3	University of Chicago
4	University of Chicago	4	University of Pennsylvania
5	Princeton University	5	Massachusetts Institute of Technology
6	Stanford University	6	Columbia University
7	Brown University	7	Stanford University
8	University of California - San Diego	8	Ohio State University
9	New York University	9	Duke University
10	University of California - Davis	9	Northwestern University
11	Yale University	11	University of North Carolina - Chapel Hill
12	Columbia University	12	Boston College
13	Boston University	13	University of California - Los Angeles
14	University of Notre Dame	14	University of California - Berkeley
15	University of Pennsylvania	15	University of Texas - Austin
16	Northwestern University	16	Cornell University
17	University of Texas - Austin	16	University of Southern California
18	University of Michigan	18	Indiana University
19	University of California - Los Angeles	19	University of Michigan
20	Boston College	19	University of Washington - Seattle
21	Dartmouth College	21	Washington University in St. Louis
22	Univesity of Southern California	22	University of Maryland
23	University of Maryland	23	University of Illinois - Urbana/Champaign
24	University of California - Irvine	24	Yale University
25	Duke University	25	Arizona State University
26	University of Virginia	26	University of Notre Dame
27	Georgetown University	27	University of Minnesota
28	University of Wisconsin - Madison		
		29	University of Utah
30	Texas A&M University	30	University of Houston
31	Cornell University	31	Purdue University
32	Vanderbilt University	31	Georgia State University
33	Michigan State University	33	Georgetown University
34	University of Minnesota	33	University of Texas - Dallas
35	Arizona State University	35	Rice University
36	Georgia State University	36	University of Virginia
37	University of California - Santa Cruz	36	Michigan State University
38	University of California - Santa Barbara	38	University of Rochester
39	University of Colorado	38	Emory University
40	University of Pittsburgh	38	Carnegie Mellon University
41	Williams College	38	Dartmouth College
42	Pennsylvania State University	42	University of Florida
43	Rutgers University	42	University of California - San Diego
44	Purdue University	44	Boston Univeristy
45	Washington University in St. Louis	44	Fordham University
46	George Mason University	46	Pennsylvania State University
47	Ohio State University	46	University of Iowa
48	Tufts University	48	University of Georgia
49	University of Oregon	48	Texas A&M University
50	Drexel University	48	University of California - Irvine

This table shows the list of top-50 U.S. economics and finance departments as of October 2020 based on the most recent 10 years of data. The source of the rankings for both department types are the same as in Table IA.2.

Table IA.4
Top-50 non-U.S. economics and finance departments

Economics Departments		Finance Departments	
5	Paris School of Economics	15	London Business School
8	Oxford University	26	Hong Kong University of Science & Technology
9	Toulouse School of Economics	27	University of Toronto
14	Barcelona Graduate School of Economics	29	Swiss Finance Institute
20	University College London	32	University of British Columbia
21	London School of Economics	32	London School of Economics
27	Universiteit van Tilburg	37	INSEAD
31	University of British Columbia	41	Tilburg University
32	University of Warwick		
35	University of Toronto		
36	University of Nottingham		
37	University of Cambridge		
38	University of Zurich		
43	Monash University		
44	Aarhus University		
45	University of Queensland		
46	University of Groningen		
47	Erasmus University of Rotterdam		
49	University of Bologna		
50	Queen's University		

This table shows the list of top-50 non-U.S. economics and finance departments as of October 2020. The source of the rankings for both department types are the same as in Table IA.**2**.

Table IA.5
51–100 U.S. economics and finance departments

Economics Departments		Finance Departments	
56	Indiana University	52	Tulane University
57	Carnegie Mellon University	53	University of California - Irvine
62	Purdue University	53	University of Texas - Dallas
63	University of Missouri	55	Virginia Tech
65	Emory University	56	Boston University
66	University of Illinois - Urbana/Champaign	60	University of Pittsburgh
67	University of Houston	61	Georgia Institute of Technology
69	Syracuse University	61	Louisiana State University
72	University of North Carolina - Chapel-Hill	64	University of California - Davis
73	University of Wyoming	64	University of Oregon
74	Rice University	67	University of South Carolina
75	University of Arizona	71	State University of New York - Buffalo
76	University of Illinois - Chicago	72	University of Kentucky
77	Stony Brook University	73	Case Western Reserve University
79	Southern Methodist University	73	University of Delaware
82	Tulane University	73	Temple University
85	Drexel University	76	Northeastern University
86	University of Georgia	77	Santa Clara University
87	University of Wisconsin - Milwaukee	78	George Washington University
91	American University	85	Syracuse University
92	University of Kansas	86	University of Tennessee
94	University of Texas - Dallas	88	University of California - Riverside
97	North Carolina State University	88	University of Illinois - Chicago
98	College of William and Mary	94	University of Alabama
99	Kelley School of Business, Indiana University	96	University of Kansas

This table shows the list of the randomly selected economics and finance departments outside the top 50 as of October 2020. The source of the rankings for both department types are the same as in Table IA.2.

Table IA.6
Changes in research production by department ranking and job title using Poisson regressions

	(1)	(2)	(3)	(4)
COVID	0.217***	0.176***	0.338***	0.205***
	(0.045)	(0.048)	(0.057)	(0.051)
Finance × COVID	0.127**			0.125**
	(0.059)			(0.057)
Top 11-25 department × COVID		0.103**		0.091*
		(0.050)		(0.053)
Top 10 department × COVID		0.162***		0.165***
		(0.061)		(0.060)
Associate professor × COVID			-0.131	-0.135*
			(0.081)	(0.077)
Full professor × COVID			-0.080	-0.088
			(0.057)	(0.056)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
Mean production (papers per year)	1.146	1.146	1.146	1.146

This table reports coefficient estimates from a Poisson regression model with the same covariates as the regressions reported in Table 4. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, as well as month-of-year interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.7
Changes in research production by department ranking and job title using Zero-Inflated Poisson regressions: marginal effects

	(1)	(2)	(3)	(4)
COVID	0.330***	0.331***	0.335***	0.332***
	(0.031)	(0.031)	(0.032)	(0.031)
Finance × COVID	0.207***			0.212***
	(0.066)			(0.067)
Top 11-25 department × COVID		0.145**		0.125*
		(0.072)		(0.072)
Top 10 department × COVID		0.336***		0.326***
		(0.079)		(0.080)
Associate professor × COVID			-0.174*	-0.155
			(0.093)	(0.095)
Full professor × COVID			-0.0433	-0.0451
			(0.074)	(0.075)
Author fixed effects	No	No	No	No
Month of year × covariates fixed effects	No	No	No	No
Observations	114,168	114,168	114,168	114,168
Mean production (papers per year)	1.146	1.146	1.146	1.146

This table reports marginal effects from a Zero-Inflated Poisson regression model with the same covariates as the regressions reported in Table 4. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, as well as month-of-year interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.8
Changes in research production by department ranking and job title using quantile regressions: 50th percentile

	(1)	(2)	(3)	(4)
COVID	0.184***	0.190***	0.334***	0.288***
	(0.035)	(0.045)	(0.058)	(0.068)
Finance × COVID	0.068			0.059
	(0.055)			(0.055)
Top 11-25 department × COVID		-0.014		-0.013
		(0.063)		(0.062)
Top 10 department × COVID		0.085		0.103
		(0.064)		(0.063)
Associate professor × COVID			-0.128	-0.122
			(0.088)	(0.082)
Full professor × COVID			-0.174***	-0.178***
			(0.063)	(0.066)
Author fixed effects	Yes	Yes	Yes	Yes
Observations	10,220	10,220	10,220	10,220

This table reports coefficients for quantile regressions for the median percentile of annual paper postings with the same covariates as the regressions reported in Table 4. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, aggregated to the author-year level. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.9
Changes in research production by department ranking and job title using quantile regressions: 75th percentile

	(1)	(2)	(3)	(4)
COVID	0.394***	0.372***	0.629***	0.448***
	(0.059)	(0.072)	(0.099)	(0.114)
Finance × COVID	0.222**			0.237**
	(0.093)			(0.093)
Top 11-25 department × COVID		0.042		0.016
		(0.102)		(0.099)
Top 10 department × COVID		0.320***		0.305***
		(0.111)		(0.114)
Associate professor × COVID			-0.364**	-0.349**
			(0.143)	(0.144)
Full professor × COVID			-0.150	-0.155
			(0.108)	(0.115)
Author fixed effects	Yes	Yes	Yes	Yes
Observations	10,220	10,220	10,220	10,220

This table reports coefficients for quantile regressions for the 75^{th} percentile of annual paper postings with the same covariates as the regressions reported in Table 4. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, aggregated to the author-year level. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.10
Changes in research production by department ranking and job title with time trends and month fixed effects

	(1)	(2)	(3)	(4)
Finance × COVID	0.193**			0.228**
	(0.096)			(0.090)
Top 11-25 department × COVID		0.049		0.017
		(0.074)		(0.076)
Top 10 department × COVID		0.440***		0.405***
		(0.101)		(0.100)
Associate professor × COVID			0.015	0.028
			(0.112)	(0.117)
Full professor × COVID			0.198**	0.197**
			(0.093)	(0.088)
Time trend × covariates	Yes	Yes	Yes	Yes
Author fixed effects	Yes	Yes	Yes	Yes
Month fixed effects	Yes	Yes	Yes	Yes
Department × month fixed effects	No	No	Yes	No
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.062	0.062	0.113	0.063
Mean production (papers per year)	1.146	1.146	1.146	1.146

This table repeats the regressions reported in Table 4 with additional control variables for month fixed effects and linear time trends interacted with the covariates. Column (3) also includes department-month fixed effects. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, and month-of-year interacted with covariate fixed effects are included where indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.11
Changes in research production by department ranking and job title measured with non-COVID papers

	(1)	(2)	(3)	(4)
COVID	0.026	0.007	0.178***	0.049
	(0.044)	(0.051)	(0.060)	(0.053)
Finance × COVID	0.154**			0.152**
	(0.071)			(0.069)
Top 11-25 department × COVID		0.085*		0.072
		(0.047)		(0.050)
Top 10 department × COVID		0.170**		0.170**
		(0.070)		(0.067)
Associate professor × COVID			-0.167**	-0.163**
			(0.071)	(0.068)
Full professor × COVID			-0.111	-0.112
			(0.070)	(0.069)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.056	0.055	0.055	0.057
Mean non-COVID production (papers per year)	1.089	1.089	1.089	1.089

This table repeats the regressions reported in Table 4 with non-COVID research papers as the dependent variable instead of including all papers. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of non-COVID papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, and month-of-year interacted with covariate fixed effects are included where indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.12
Changes in research production by department ranking and job title measured with NBER papers

	(1)	(2)	(3)	(4)
COVID	0.261***	0.114***	0.294***	0.139***
	(0.052)	(0.031)	(0.056)	(0.052)
Finance × COVID	0.032			0.034
	(0.045)			(0.045)
Top 11-25 department × COVID		0.149***		0.146***
		(0.041)		(0.043)
Top 10 department × COVID		0.386***		0.384***
		(0.091)		(0.088)
Associate professor × COVID			-0.100	-0.074
			(0.077)	(0.074)
Full professor × COVID			-0.006	-0.040
			(0.055)	(0.053)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.089	0.090	0.089	0.091
Mean production (NBER papers per year)	0.526	0.526	0.526	0.526

This table repeats the regressions reported in Table 4 with NBER research papers as the dependent variable instead of including all papers. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of NBER papers posted (where the posting date is the date the paper was posted as a NBER working paper), which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, and month-of-year interacted with covariate fixed effects are included where indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.13
Changes in research production by department ranking and job title adjusted for number of authors

	(1)	(2)	(3)	(4)
COVID	0.071***	0.048**	0.084***	0.010
	(0.023)	(0.020)	(0.031)	(0.027)
Finance × COVID	0.075**			0.083***
	(0.030)			(0.029)
Top 11-25 department × COVID		0.042*		0.031
		(0.023)		(0.023)
Top 10 department × COVID		0.132***		0.123***
		(0.032)		(0.032)
Associate professor × COVID			-0.031	-0.026
			(0.038)	(0.038)
Full professor × COVID			0.034	0.031
			(0.033)	(0.032)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.054	0.054	0.054	0.056
Mean production (author-adjusted papers per year)	0.472	0.472	0.472	0.472

This table repeats the regressions reported in Table 4 with papers adjusted for number of authors as the dependent variable. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted adjusted for number of authors, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, and month-of-year interacted with covariate fixed effects are included where indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.14
Changes in research production by department ranking and job title measured by number of pages posted

	(1)	(2)	(3)	(4)
COVID	11.021***	8.640***	18.595***	8.379**
	(3.103)	(2.963)	(4.323)	(3.471)
Finance × COVID	11.180**			11.830**
	(4.732)			(4.633)
Top 11-25 department × COVID		5.090		3.824
		(3.083)		(3.258)
Top 10 department × COVID		17.096***		16.349***
		(5.126)		(5.063)
Associate professor × COVID			-10.673**	-10.020*
			(5.246)	(5.075)
Full professor × COVID			-2.597	-3.009
			(4.624)	(4.649)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.056	0.056	0.056	0.058
Mean production (pages per year)	62.22	62.22	62.22	62.22

This table repeats the regressions reported in Table 4 with number of pages posted as the dependent variable. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of pages posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) fixed effects, and month-of-year interacted with covariate fixed effects are included where indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.15
Citation-adjusted changes in research production by department ranking and job title

	(1)	(2)	(3)	(4)
COVID	2.765***	1.243**	4.844***	2.186
	(0.788)	(0.623)	(1.365)	(1.453)
Finance × COVID	1.721			1.576
	(1.356)			(1.362)
Top 11-25 department × COVID		1.868		1.784
		(1.273)		(1.270)
Top 10 department × COVID		5.442***		5.601***
		(1.756)		(1.767)
Associate professor × COVID			-2.190	-1.808
			(1.860)	(1.820)
Full professor × COVID			-1.819	-2.156
			(1.617)	(1.644)
Author fixed effects	Yes	Yes	Yes	Yes
Linear time trend	Yes	Yes	Yes	Yes
Linear time trend × covariates	Yes	Yes	Yes	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations	16,864	16,864	16,864	16,864
R^2	0.162	0.164	0.162	0.164
Mean productivity (cite-adj. papers per year)	3.643	3.643	3.643	3.643

This table reports coefficients for regressions estimating equation (2) with professional characteristics. Observations are at the author-month level. The sample consists of papers by economics and finance faculty at top-50 U.S. departments which were posted from November 2019 to June 2020. The dependent variable is number of papers posted, where each paper is multiplied by the number of citations received as of July 2022, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects and linear time trends interacted with covariates. Standard errors clustered by author are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.16
Research production changes by gender and age using Poisson regressions

	(1)	(2)	(3)
COVID	0.276***	0.407***	0.375***
	(0.041)	(0.072)	(0.086)
Female × COVID	-0.055		
	(0.051)		
Age 35–49 × COVID		-0.157**	-0.083
		(0.069)	(0.081)
Age 50+ × COVID		-0.181***	-0.154*
		(0.066)	(0.080)
Female × age under 35 × COVID			0.153
			(0.127)
Female × age 35–49 × COVID			-0.234***
			(0.072)
Female × age 50+ × COVID			0.059
			(0.099)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
Mean production (papers per year)	1.146	1.146	1.146

This table reports coefficient estimates from a Poisson regression model with the same covariates as the regressions reported in Table 5. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.17
Research production changes by gender and age using Zero-Inflated Poisson regressions: marginal effects

	(1)	(2)	(3)
COVID	0.333***	0.329***	0.329***
	(0.032)	(0.031)	(0.031)
Female × COVID	-0.109		-0.116
	(0.078)		(0.078)
Age 35–49 × COVID		-0.172*	-0.159*
		(0.091)	(0.093)
Age 50+ × COVID		-0.212**	-0.208**
		(0.093)	(0.095)
Female × COVID [at age $<$ 35]			0.0919
			(0.175)
Female × COVID [at age $\geq$ 35, age $<$ 50]			-0.311***
			(0.106)
Female × COVID [at age $\geq$ 50]			0.0233
			(0.142)
Author fixed effects	No	No	No
Month of year × covariates fixed effects	No	No	No
Observations	114,168	114,168	114,168
Mean productivity (papers per year)	1.146	1.146	1.146

This table reports marginal effects from a Zero-Inflated Poisson regression model with the same covariates as the regressions reported in Table 5. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.18
Research production changes by gender and age using quantile regressions: 50th percentile

	(1)	(2)	(3)
COVID	0.208***	0.419***	0.389***
	(0.029)	(0.068)	(0.076)
Female × COVID	0.010		
	(0.067)		
Age 35–49 × COVID		-0.230***	-0.167*
		(0.076)	(0.088)
Age 50+ × COVID		-0.280***	-0.265***
		(0.082)	(0.089)
Female × age under 35 × COVID			0.126
			(0.158)
Female × age 35–49 × COVID			-0.158
			(0.097)
Female × age 50+ × COVID			0.134
			(0.140)
Author fixed effects	Yes	Yes	Yes
Observations	10,220	10,220	10,220

This table reports coefficients for quantile regressions for the median percentile of annual paper postings with the same covariates as the regressions reported in Table 5. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, aggregated to the author-year level. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.19
Research production changes by gender and age using quantile regressions: 75th percentile

	(1)	(2)	(3)
COVID	0.488***	0.704***	0.688***
	(0.050)	(0.116)	(0.132)
Female × COVID	-0.060		
	(0.117)		
Age 35–49 × COVID		-0.245*	-0.164
		(0.135)	(0.153)
Age 50+ × COVID		-0.309**	-0.314**
		(0.133)	(0.148)
Female × age under 35 × COVID			0.069
			(0.249)
Female × age 35–49 × COVID			-0.308*
			(0.168)
Female × age 50+ × COVID			0.183
			(0.229)
Author fixed effects	Yes	Yes	Yes
Observations	10,220	10,220	10,220

This table reports coefficients for quantile regressions for the 75^{th} percentile of annual paper postings with the same covariates as the regressions reported in Table 5. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, aggregated to the author-year level. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.20
Research production changes by gender and age with time trends and department-month fixed effects

	(1)	(2)	(3)
Female × COVID	-0.134		
	(0.083)		
Age 35–49 × COVID		0.063	0.139
		(0.129)	(0.150)
Age 50+ × COVID		0.166	0.167
		(0.127)	(0.154)
Female × age under 35 × COVID			0.049
			(0.205)
Female × age 35–49 × COVID			-0.317**
			(0.127)
Female × age 50+ × COVID			0.089
			(0.128)
Time trend × covariates	Yes	Yes	Yes
Author fixed effects	Yes	Yes	Yes
Department × month fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
R^2	0.113	0.114	0.114
Mean production (papers per year)	1.146	1.146	1.146

This table repeats the regressions reported in Table 5 with additional control variables for linear time trends interacted with the covariates and department-month fixed effects. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author, department-month, and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.21
Research production changes by gender and age measured with non-COVID papers

	(1)	(2)	(3)
COVID	0.093**	0.231***	0.190**
	(0.044)	(0.073)	(0.090)
Female × COVID	-0.053		
	(0.052)		
Age 35–49 × COVID		-0.168**	-0.076
		(0.077)	(0.096)
Age 50+ × COVID		-0.190**	-0.157*
		(0.075)	(0.092)
Female × age under 35 × COVID			0.172
			(0.147)
Female × age 35–49 × COVID			-0.246***
			(0.066)
Female × age 50+ × COVID			0.070
			(0.112)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
R^2	0.055	0.055	0.056
Mean non-COVID production (papers per year)	1.089	1.089	1.089

This table repeats the regressions reported in Table 5 with non-COVID research papers as the dependent variable instead of including all papers. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of non-COVID papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.22
Research production changes by gender and age with NBER papers

	(1)	(2)	(3)
COVID	0.292***	0.403***	0.412***
	(0.052)	(0.075)	(0.085)
Female × COVID	-0.108*		
	(0.055)		
Age 35–49 × COVID		-0.118*	-0.084
		(0.068)	(0.075)
Age 50+ × COVID		-0.202***	-0.203***
		(0.064)	(0.067)
Female × age under 35 × COVID			-0.035
			(0.089)
Female × age 35–49 × COVID			-0.207**
			(0.081)
Female × age 50+ × COVID			-0.066
			(0.094)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
R^2	0.089	0.089	0.089
Mean production (NBER papers per year)	0.526	0.526	0.526

This table repeats the regressions reported in Table 5 with NBER research papers as the dependent variable instead of including all papers. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of NBER papers posted (where the posting date is the date the paper was posted as a NBER working paper), which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.23
Research production changes by gender and age adjusted for number of authors

	(1)	(2)	(3)
COVID	0.107***	0.140***	0.130**
	(0.022)	(0.043)	(0.051)
Female × COVID	-0.044		
	(0.027)		
Age 35–49 × COVID		-0.056	-0.024
		(0.037)	(0.045)
Age 50+ × COVID		-0.042	-0.032
		(0.042)	(0.051)
Female × age under 35 × COVID			0.042
			(0.074)
Female × age 35–49 × COVID			-0.107**
			(0.043)
Female × age 50+ × COVID			-0.003
			(0.046)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
R^2	0.054	0.054	0.054
Mean production (author-adjusted papers per year)	0.472	0.472	0.472

This table repeats the regressions reported in Table 5 with papers adjusted for number of authors as the dependent variable. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted adjusted for number of authors, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.24
Research production changes by gender and age measured by number of pages posted

	(1)	(2)	(3)
COVID	16.127***	24.315***	21.257***
	(3.377)	(6.271)	(7.431)
Female × COVID	-5.245*		
	(3.134)		
Age 35–49 × COVID		-10.419*	-3.872
		(5.868)	(6.858)
Age 50+ × COVID		-11.675**	-8.435
		(5.423)	(6.884)
Female × age under 35 × COVID			12.759
			(7.801)
Female × age 35–49 × COVID			-16.881***
			(4.534)
Female × age 50+ × COVID			-1.599
			(6.204)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	114,168	114,168	114,168
R^2	0.056	0.056	0.056
Mean production (pages per year)	62.22	62.22	62.22

This table repeats the regressions reported in Table 5 with number of pages posted as the dependent variable. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of pages posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.25
Citation-adjusted research production changes by gender and age

	(1)	(2)	(3)
COVID	3.699***	6.795***	8.297***
	(0.744)	(2.090)	(2.650)
Female × COVID	-1.584		
	(1.359)		
Age 35–49 × COVID		-4.267*	-5.533*
		(2.268)	(2.850)
Age 50+ × COVID		-3.992*	-5.530**
		(2.278)	(2.819)
Female × age under 35 × COVID			-6.118*
			(3.591)
Female × age 35–49 × COVID			-1.141
			(1.735)
Female × age 50+ × COVID			0.312
			(2.881)
Author fixed effects	Yes	Yes	Yes
Linear time trend × covariates	Yes	Yes	Yes
Sample time window	8 months	8 months	8 months
Observations	16,864	16,864	16,864
R^2	0.162	0.162	0.162
Mean productivity (cite-adj. papers per year)	3.643	3.643	3.643

This table reports coefficient estimates for regressions with the same covariates as Table 5. The sample consists of papers by economics and finance faculty at top-50 U.S. departments which were posted from November 2019 to June 2020. The dependent variable is number of papers posted, where each paper is multiplied by the number of citations received as of July 2022, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects and linear time trends interacted with the covariates. Standard errors clustered by author are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.26
Research production changes by gender and probability of having a young child

	OLS		Poisson	
	(1)	(2)	(3)	(4)
COVID	0.277***	0.263***	0.228***	0.212***
	(0.053)	(0.050)	(0.043)	(0.040)
Young child probability × COVID	0.136	0.229*	0.103	0.168*
	(0.116)	(0.136)	(0.088)	(0.097)
Young child probability × female × COVID		-0.509*		-0.434*
		(0.266)		(0.228)
Female × COVID		0.087		0.118
		(0.110)		(0.103)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes
Month of year × female fixed effects	No	Yes	No	Yes
Observations	114,168	114,168	114,168	114,168
R^2	0.060	0.060		
Mean production (papers per year)	1.146	1.146	1.146	1.146

This table repeats the regressions reported in Table 5 using probability of having a child under the age of 12 instead of indicator variables for age ranges. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of pages posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. Young child probability is the probability of having children under the age of 12 based on the authors age and gender as estimated in Figure IA.9. All regressions include author fixed effects and month-of-year (seasonality) fixed effects (interacted gender as indicated). Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.27
Sample extensions using Poisson regressions

Sample departments	(1) Top 100 U.S.	(2) Top 50 international	(3) U.S. rank 51-100	(4) Top 50 non-U.S.	(5) Top 50 U.S. (recent ranking)
COVID	0.176***	0.268***	0.501***	0.287***	0.231***
	(0.044)	(0.039)	(0.095)	(0.111)	(0.044)
Top 51-100 department × COVID	0.059				
	(0.079)				
Top 11-25 department × COVID	0.104**				0.036
	(0.052)				(0.054)
Top 10 department × COVID	0.163***				0.100**
	(0.063)				(0.039)
Non-U.S. × COVID		-0.044			
		(0.061)			
Age 35–49 × COVID			-0.341***	0.040	
			(0.121)	(0.127)	
Age 50+ × COVID			-0.294**	-0.190	
			(0.128)	(0.142)	
Female × age under 35 × COVID			-0.336*	0.498**	
			(0.191)	(0.235)	
Female × age 35–49 × COVID			0.018	-0.336**	
			(0.164)	(0.153)	
Female × age 50+ × COVID			-0.085	-0.243*	
			(0.256)	(0.142)	
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	145,808	159,904	31,640	45,736	113,788
Mean production (papers per year)	1.084	1.088	0.862	0.946	1.168

This table reports coefficient estimates from a Poisson regression model with the same extended samples and covariates as the regressions reported in Table 6. Column (1) extends the sample to include a random sample of 25 economics departments and 25 finance departments ranked 26–100. Column (2) extends the sample to include non-U.S. departments that are in the top 50 internationally. Columns (3) and (4) consider the sample extensions on their own, separate from the baseline sample of top-50 U.S. departments. Column (5) considers alternative department rankings based on the most recent 10 years of data. Observations are at the author-month level. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.28
Coauthor network summary

	mean	sd	p25	p50	p75
Number of coauthors	5.829	5.120	2	4	8
Number of in-sample coauthors	1.586	1.701	0	1	2
Same-department coauthorship	0.0934	0.191	0	0	0.111
New coauthorship	0.621	0.296	0.429	0.625	0.889
Sole authorship	0.0908	0.210	0	0	0

This table reports pre-COVID coauthor network summary statistics. The sample consists of tenure-track faculty in top-50 U.S. economics and finance departments who posted at least one paper in SSRN from July 2016 to February 2020. Number of coauthors represents the number of unique coauthors each author had between July 2016 and February 2020. Number of in-sample coauthors is the number of those coauthors who are in the author sample (i.e., tenure-track faculty in top-50 U.S. economics and finance departments). Same-department and new coauthorship represent the share of the author's coauthorships that are in the same department as the author and that are new relationships, respectively. Sole authorship is the share of author's papers that are sole-authored.

Table IA.29
Coauthor characteristics using Poisson regressions

	(1)	(2)	(3)	(4)	(5)
COVID	0.239***	0.152***	0.093	0.290***	0.276**
	(0.040)	(0.056)	(0.057)	(0.075)	(0.109)
Same department coauthor share × COVID	-0.198				
	(0.149)				
Finance coauthor share × COVID		0.016			
		(0.065)			
Top 11-25 department coauthor share × COVID			-0.013		
			(0.077)		
Top 10 department coauthor share × COVID			-0.018		
			(0.100)		
Associate professor coauthor share × COVID				-0.033	
				(0.084)	
Full professor coauthor share × COVID				-0.098	
				(0.067)	
Age 35–49 coauthor share × COVID					0.043
					(0.093)
Age 50+ coauthor share × COVID					0.021
					(0.111)
Female under 35 coauthor share × COVID					0.228
					(0.156)
Female 35–49 coauthor share × COVID					-0.207*
					(0.118)
Female 50+ coauthor share × COVID					-0.213
					(0.268)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Finance × COVID fixed effects	No	Yes	No	No	No
Department rank × COVID fixed effects	No	No	Yes	No	No
Associate and full prof. × COVID fixed effects	No	No	No	Yes	No
Gender × age × COVID fixed effects	No	No	No	No	Yes
Observations	106,928	82,648	82,648	82,872	82,872
Mean productivity (papers per year)	1.196	1.315	1.315	1.313	1.313

This table reports coefficient estimates from a Poisson regression model with the same pre-COVID coauthor network covariates as the regressions reported in Table 8. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. *Same department coauthor share* is the share of pre-COVID coauthors that are in the researcher's own department. The coauthor share variables in columns (2) through (5) are the share of in-sample coauthors that are in the indicated group. All regressions include author and month-of-year (seasonality) fixed effects. Columns (2) through (5) include fixed effects for the researcher's own field, department rank, title, gender, and age interacted with $COVID$ as indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.30
Coauthor spillover regression in restricted subsamples

	(1)	(2)	(3)	(4)	(5)
Sample:	Men	Men Under 35	Men Age 35-49	Men Age 50+	Men Under 35 and 50+
COVID	0.384**	0.153	0.387***	0.463**	0.350*
	(0.147)	(0.250)	(0.113)	(0.215)	(0.184)
Age 35-49 coauthor share × COVID	0.047	0.479	-0.040	-0.159	0.138
	(0.130)	(0.310)	(0.156)	(0.227)	(0.183)
Age 50+ coauthor share × COVID	0.019	0.068	0.135	-0.209	-0.025
	(0.155)	(0.391)	(0.177)	(0.249)	(0.201)
Female under 35 coauthor share × COVID	0.380	1.314	-0.103	0.063	0.533
	(0.297)	(0.844)	(0.536)	(0.299)	(0.343)
Female 35-49 coauthor share × COVID	-0.327***	-1.009*	-0.268**	-0.208	-0.405*
	(0.112)	(0.517)	(0.116)	(0.243)	(0.221)
Female 50+ coauthor share × COVID	-0.217	-0.611	-0.188	-0.158	-0.211
	(0.347)	(0.581)	(0.723)	(0.410)	(0.387)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Age group × COVID fixed effects	Yes	N/A	N/A	N/A	Yes
Observations	68,336	11,392	33,088	23,856	35,248
R^2	0.060	0.045	0.054	0.075	0.066
Mean productivity (papers per year)	1.348	1.266	1.303	1.448	1.389

This table replicates column (5) of Table 8 in restricted subsamples. Observations are at the author-month level. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. The coauthor share variables are the share of in-sample coauthors that are in the indicated group. All regressions include author and month-of-year (seasonality) fixed effects, and age interacted with $COVID$ fixed effects are included as indicated. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.31
Betweeness centrality summary

	Mean	SD	p10	p25	p50	p75	p90
Overall	0.0019	0.0048	0	0	0	0.0018	0.0053
Ranking							
Top 10	0.0030	0.0067	0	0	0.0007	0.0033	0.0075
11-25	0.0016	0.0038	0	0	0	0.0014	0.0048
26-50	0.0012	0.0028	0	0	0	0.0010	0.0036
Gender							
Female	0.0015	0.0045	0	0	0	0.0016	0.0041
Male	0.0020	0.0048	0	0	0	0.0019	0.0056

This table reports summary statistics for the betweeness centrality measure for the full sample of authors, as well as by department ranking and gender.

Table IA.32
Coauthor network structure

	(1)	(2)	(3)	(4)	(5)	(6)
COVID	0.165***	0.271***	0.271***	0.456***	0.457***	0.047
	(0.044)	(0.056)	(0.056)	(0.119)	(0.119)	(0.104)
Large network (scaled) × COVID	0.232***					0.363**
	(0.062)					(0.174)
Between centrality × COVID		0.297***				0.340***
		(0.063)				(0.061)
Between centrality (scaled) × COVID			0.256***			
			(0.044)			
Coauthor similarity to author × COVID				-0.207***		-0.194***
				(0.067)		(0.066)
Coauthor similarity to each other × COVID					-0.113*	-0.005
					(0.064)	(0.066)
Author fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	108,684	108,552	108,552	27,848	27,848	27,848
R^2	0.059	0.060	0.059	0.053	0.053	0.055
Mean production (papers per year)	1.183	1.183	1.183	1.723	1.723	1.723

This table reports coefficients for regressions estimating equation (2) with pre-COVID coauthor network characteristics. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. *COVID* is an indicator variable that takes the value of one starting in March 2020. *Large network (scaled)* is an indicator variable for researchers with number of pre-COVID unique coauthors divided by number of pre-COVID papers above the median, which is 1.5. *Between centrality* is the betweenness centrality for each author (node) where edges represent coauthor relationships in the pre-COVID period. *Between centrality (scaled)* is the ratio of *Between centrality* to the number of pre-COVID papers. *Coauthor similarity to author* is the average cosine similarity between the vector of JEL codes for an author and each in-sample coauthor, where each JEL vector is normalized to sum to one and is computed using only papers the two authors do not share. *Coauthor similarity to each other* is constructed in a similar fashion, but across all pair-wise combinations of coauthors. The sample in columns (4) to (6) is restricted to authors with at least two in-sample coauthors for whom JEL codes are available. All continuous variables are standardized to be mean-zero with unit variance. All regressions include author and month-of-year (seasonality) fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.33
Coauthor network structure using Poisson regressions

	(1)	(2)	(3)	(4)	(5)	(6)
COVID	0.128***	0.194***	0.193***	0.250***	0.245***	0.057
	(0.033)	(0.040)	(0.039)	(0.056)	(0.057)	(0.055)
Large network (scaled) × COVID	0.198***					0.238***
	(0.044)					(0.086)
Between centrality × COVID		0.048***				0.056***
		(0.011)				(0.009)
Between centrality (scaled) × COVID			0.159***			
			(0.021)			
Coauthor similarity to author × COVID				-0.120***		-0.117***
				(0.033)		(0.036)
Coauthor similarity to each other × COVID					-0.050	0.022
					(0.036)	(0.037)
Author fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	108,684	108,552	108,552	27,848	27,848	27,848
Mean production (papers per year)	1.183	1.183	1.183	1.723	1.723	1.723

This table reports coefficient estimates from a Poisson regression model with the same pre-COVID coauthor network covariates as the regressions reported in Table **32**. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. *Large network (scaled)* is an indicator variable for researchers with number of pre-COVID unique coauthors divided by number of pre-COVID papers above the median, which is 1.5. *Between centrality* is the betweenness centrality for each author (node) where edges represent coauthor relationships in the pre-COVID period. *Between centrality (scaled)* is the ratio of *Between centrality* to the number of pre-COVID papers. *Coauthor similarity to author* is the average cosine similarity between the vector of JEL codes for an author and each in-sample coauthor, where each JEL vector is normalized to sum to one and is computed using only papers the two authors do not share. *Coauthor similarity to each other* is constructed in a similar fashion, but across all pair-wise combinations of coauthors. The sample in columns (4) to (6) is restricted to authors with at least two in-sample coauthors for whom JEL codes are available. All continuous variables are standardized to be mean-zero with unit variance. All regressions include author and month-of-year (seasonality) fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.34
Citation-adjusted research production by coauthor network, demographic, and professional characteristics

	(1)	(2)	(3)	(4)	(5)
COVID	3.548***	1.868***	9.237***	6.030**	7.532***
	(0.646)	(0.690)	(2.661)	(2.502)	(2.579)
Between centrality × COVID	3.455***	3.103**	3.577***		3.234**
	(1.325)	(1.335)	(1.346)		(1.358)
Top 11-25 department × COVID		1.490		1.831	1.434
		(1.251)		(1.265)	(1.245)
Top 10 department × COVID		4.135**		5.289***	3.887**
		(1.680)		(1.738)	(1.661)
Age 35–49 × COVID			-7.044**	-5.300*	-6.814**
			(2.901)	(2.822)	(2.879)
Age 50+ × COVID			-6.121**	-5.481*	-6.122**
			(2.809)	(2.806)	(2.803)
Female × age under 35 × COVID			-5.805	-5.821	-5.646
			(3.667)	(3.572)	(3.661)
Female × age 35–49 × COVID			-0.565	-0.906	-0.452
			(1.822)	(1.718)	(1.807)
Female × age 50+ × COVID			0.859	0.224	0.762
			(2.834)	(2.870)	(2.836)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Linear time trend	Yes	Yes	Yes	Yes	Yes
Linear time trend × covariates	No	Yes	Yes	Yes	Yes
Observations	16,608	16,608	16,608	16,864	16,608
R^2	0.165	0.166	0.166	0.164	0.167
Mean productivity (papers per year)	3.677	3.677	3.677	3.643	3.677

This table reports coefficient estimates for regressions with the same covariates as Table **9**. The sample consists of papers by economics and finance faculty at top-50 U.S. departments which were posted from November 2019 to June 2020. The dependent variable is number of papers posted, where each paper is multiplied by the number of citations received as of July 2022, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author fixed effects and linear time trends (interacted with the covariates where indicated). Standard errors clustered by author are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.35
Research production changes by coauthor network and professional characteristics for women age 35–49

	(1)	(2)	(3)
COVID	0.011	0.030	-0.057
	(0.073)	(0.119)	(0.133)
Between centrality × COVID	0.119		0.106
	(0.172)		(0.182)
Top 11-25 department × COVID		0.028	0.122
		(0.240)	(0.237)
Top 10 department × COVID		0.096	0.129
		(0.141)	(0.188)
Author fixed effects	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	No	Yes	Yes
Observations	10,256	10,612	10,256
R^2	0.036	0.040	0.039
Mean productivity (papers per year)	1.062	1.039	1.062

This table reports coefficient estimates for regressions with the same covariates as Table **9**. The sample consists of women age 35–49 at top-50 U.S. economics and finance departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.36
Research production changes by department ranking and job title, controlling for betweenness centrality

	(1)	(2)	(3)	(4)
COVID	0.210***	0.155***	0.336***	0.162**
	(0.062)	(0.057)	(0.082)	(0.071)
Finance × COVID	0.163*			0.170**
	(0.084)			(0.081)
Top 11-25 department × COVID		0.141**		0.123**
		(0.058)		(0.061)
Top 10 department × COVID		0.241***		0.232***
		(0.081)		(0.078)
Associate professor × COVID			-0.176*	-0.165
			(0.102)	(0.099)
Full professor × COVID			-0.057	-0.055
			(0.077)	(0.076)
Between centrality × COVID	0.291***	0.276***	0.299***	0.273***
	(0.065)	(0.059)	(0.063)	(0.062)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	108,552	108,552	108,552	108,552
R^2	0.060	0.060	0.060	0.062
Mean production (papers per year)	1.183	1.183	1.183	1.183

This table repeats the regressions in Table 4, controlling for betweenness centrality. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.37
Research production changes by gender and age, controlling for betweenness centrality

	(1)	(2)	(3)
COVID	0.289***	0.414***	0.387***
	(0.060)	(0.115)	(0.134)
Female × COVID	-0.103		
	(0.064)		
Age 35–49 × COVID		-0.180*	-0.095
		(0.104)	(0.123)
Age 50+ × COVID		-0.158	-0.136
		(0.097)	(0.116)
Female × age under 35 × COVID			0.118
			(0.184)
Female × age 35–49 × COVID			-0.279***
			(0.092)
Female × age 50+ × COVID			0.043
			(0.108)
Between centrality × COVID	0.295***	0.300***	0.298***
	(0.063)	(0.064)	(0.063)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	108,552	108,552	108,552
R^2	0.060	0.060	0.060
Mean production (papers per year)	1.183	1.183	1.183

This table repeats the regressions in Table 5, controlling for betweenness centrality. Observations are at the author-month level. The sample consists of economics and finance faculty at top-50 U.S. departments and spans July 2016 to February 2021. The dependent variable is number of papers posted, which we annualize by multiplying by twelve. $COVID$ is an indicator variable that takes the value of one starting in March 2020. All regressions include author and month-of-year (seasonality) interacted with covariate fixed effects. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.38
Impact of COVID over time (non-COVID papers)

	(1)	(2)	(3)	(4)	(5)
COVID (early)	0.257***	0.273***	0.112	0.477***	0.202***
	(0.067)	(0.046)	(0.093)	(0.150)	(0.057)
COVID (middle)	-0.002	-0.064**	-0.075	0.070	-0.093***
	(0.039)	(0.030)	(0.055)	(0.155)	(0.026)
COVID (late)	0.010	-0.113**	-0.010	0.077	-0.040
	(0.073)	(0.046)	(0.104)	(0.108)	(0.063)
COVID (extended)	-0.095	-0.136	-0.109	-0.008	-0.116
	(0.115)	(0.109)	(0.131)	(0.110)	(0.184)
Finance × COVID (early)		-0.043			
		(0.148)			
Finance × COVID (middle)		0.169**			
		(0.076)			
Finance × COVID (late)		0.325***			
		(0.103)			
Finance × COVID (extended)		0.108			
		(0.097)			
Top 10 department × COVID (early)			0.351***		
			(0.063)		
Top 10 department × COVID (middle)			0.201*		
			(0.112)		
Top 10 department × COVID (late)			-0.024		
			(0.112)		
Top 10 department × COVID (extended)			-0.005		
			(0.061)		
Female × age 35–49 × COVID (early)				-0.341***	
				(0.108)	
Female × age 35–49 × COVID (middle)				-0.182***	
				(0.064)	
Female × age 35–49 × COVID (late)				-0.224	
				(0.150)	
Female × age 35–49 × COVID (extended)				-0.162	
				(0.124)	
Between centrality × COVID (early)					0.281***
					(0.077)
Between centrality × COVID (middle)					0.107
					(0.069)
Between centrality × COVID (late)					0.001
					(0.051)
Between centrality × COVID (extended)					0.041
					(0.100)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	No	Yes	Yes	Yes	Yes
Gender × age × COVID sub-period fixed effects	No	No	No	Yes	Yes
Observations	122,640	122,640	122,640	122,640	116,496
R^2	0.056	0.056	0.056	0.056	0.054
Mean productivity (papers per year)	1.081	1.081	1.081	1.081	1.117

This table repeats the early, middle, late, and extended COVID period regressions reported in Table 10 with production of non-COVID papers instead of overall production. $COVID$ ($early$) is an indicator variable that takes the value of one from March to June of 2020. $COVID$ ($middle$) is an indicator variable that takes the value of one from July to October of 2020. $COVID$ ($late$) is an indicator variable that takes the value of one from November 2020 to February 2021. $COVID$ ($extended$) is an indicator variable that takes the value of one from March to June of 2021. Reported coefficients are limited to the variables that are of most interest due to space considerations. Standard errors double-clustered by author and month are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.39
Sample description (alternative rankings)

Panel A: Faculty characteristics

	Mean	SD	P25	P50	P75
Papers per year	1.168	0.986	0.429	0.857	1.500
Finance (d)	0.369	0.483	-	-	-
Female (d)	0.180	0.384	-	-	-
Age	46.96	12.69	36	44	57
Assistant (d)	0.253	0.435	-	-	-
Associate (d)	0.179	0.383	-	-	-
Full (d)	0.568	0.496	-	-	-
Months in sample	53.90	7.428	56	56	56

Panel B: Paper characteristics

	Mean	SD	P25	P50	P75
Pages	53.01	23.25	38.00	52.00	65.00
Number of authors	2.69	1.00	2.00	3.00	3.00
Citations	4.82	11.64	0.00	1.00	5.00
Downloads	316.60	1,078.20	25.00	85.00	270.00

This table replicates Table 1 using the recent rankings sample described in Table IA.3. The recent ranking sample consists of 2,111 authors and 8,648 papers.

Table IA.40
Changes in research production following COVID (alternative rankings)

Panel A: Alternative production measures

Regression model: OLS	(1) All Papers	(2) Non-COVID Papers	(3) NBER Papers	(4) Author-adj. Papers	(5) Cite-adj. Papers
COVID	0.349***	0.092**	0.278***	0.108***	3.025***
	(0.057)	(0.043)	(0.044)	(0.022)	(0.646)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	No
Linear time trend	No	No	No	No	Yes
Data frequency	monthly	monthly	monthly	monthly	monthly
Sample time window	full	full	full	full	8 months
Observations	113,788	113,788	113,788	113,788	16,800
R^2	0.064	0.058	0.089	0.064	0.162
Mean production (annualized)	1.168	1.108	0.526	0.485	3.690

Panel B: Alternative regression models

Dependent variable: Papers	(1) OLS with time trend	(2) Poisson	(3) Zero-Inflated Poisson†	(4) 50th Percentile	(5) 75th Percentile
COVID	0.477***	0.277***	0.349***	0.218***	0.510***
	(0.063)	(0.040)	(0.032)	(0.028)	(0.044)
Author fixed effects	Yes	Yes	No	Yes	Yes
Month of year fixed effects	Yes	Yes	No	No	No
Linear time trend	Yes	No	No	No	No
Data frequency	monthly	monthly	monthly	annual	annual
Sample time window	full	full	full	full	full
Observations	113,788	113,788	113,788	10,186	10,186

†Marginal effect

This table replicates Table 2 using the recent rankings sample described in Table IA.3.

Table IA.41
Changes in quality metrics following COVID (alternative rankings)

Panel A: Citations per paper

	All papers		Non-COVID papers	
	(1)	(2)	(3)	(4)
COVID	1.436***	1.276***	0.171	0.105
	(0.461)	(0.450)	(0.379)	(0.387)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,410	1,410	1,247	1,247
R^2	0.009	0.012	0.006	0.008
Mean citations per paper	2.596	2.596	1.909	1.909

Panel B: Downloads per paper

	All papers		Non-COVID papers	
	(1)	(2)	(3)	(4)
COVID	40.734	39.106	16.980	17.398
	(32.645)	(32.833)	(31.779)	(31.971)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,410	1,410	1,247	1,247
R^2	0.001	0.001	0.002	0.002
Mean downloads per paper	211.8	211.8	190.4	190.4

This table replicates Table 3 using the recent rankings sample described in Table IA.3.

Table IA.42
Research production changes by department ranking and job title (alternative rankings)

	(1)	(2)	(3)	(4)
COVID	0.259***	0.247***	0.384***	0.208***
	(0.058)	(0.050)	(0.079)	(0.071)
Finance × COVID	0.247***			0.246***
	(0.078)			(0.076)
Top 11-25 department × COVID		0.077		0.054
		(0.068)		(0.069)
Top 10 department × COVID		0.265***		0.244***
		(0.069)		(0.068)
Associate professor × COVID			-0.123	-0.123
			(0.092)	(0.092)
Full professor × COVID			-0.023	-0.024
			(0.081)	(0.080)
Author fixed effects	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes	Yes
Observations	113,788	113,788	113,788	113,788
R^2	0.064	0.064	0.064	0.066
Mean productivity (papers per year)	1.168	1.168	1.168	1.168

This table replicates Table 4 using the recent rankings sample described in Table IA.3.

Table IA.43
Research production changes by gender and age (alternative rankings)

Panel A: Regression coefficients

	(1)	(2)	(3)
COVID	0.382***	0.503***	0.491***
	(0.064)	(0.106)	(0.129)
Female × COVID	-0.187**		
	(0.076)		
Age 35-49 × COVID		-0.176*	-0.084
		(0.093)	(0.111)
Age 50+ × COVID		-0.200**	-0.180
		(0.097)	(0.116)
Female × age under 35 × COVID			0.051
			(0.178)
Female × age 35-49 × COVID			-0.379***
			(0.104)
Female × age 50+ × COVID			-0.067
			(0.105)
Author fixed effects	Yes	Yes	Yes
Month of year × covariates fixed effects	Yes	Yes	Yes
Observations	113,788	113,788	113,788
R^2	0.064	0.064	0.064
Mean productivity (papers per year)	1.168	1.168	1.168

Panel B: Marginal effect of COVID

Female = 1	0.195***		
	(0.060)		
Age 35-49 = 1		0.327***	
		(0.061)	
Age 50+ = 1		0.303***	
		(0.060)	
Female = 1, age under 35 = 1			0.543***
			(0.132)
Female = 1, age 35-49 = 1			0.028
			(0.066)
Female = 1, age 50+ = 1			0.244*
			(0.125)

This table replicates Table 5 using the recent rankings sample described in Table IA.3.

Table IA.44
Changes in coauthorship following COVID (alternative rankings)

Dependent Variable:	(1) Sole-authored papers	(2) Repeat coauthorships	(3) New coauthorships
COVID	0.002	0.470***	0.430***
	(0.008)	(0.065)	(0.069)
Author fixed effects	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes
Observations	113,788	113,788	113,788
R^2	0.056	0.066	0.043
Mean dependent variable	0.0920	0.949	1.228

This table replicates Table 7 using the recent rankings sample described in Table IA.3.

Table IA.45
Coauthor characteristics (alternative rankings)

	(1)	(2)	(3)	(4)	(5)
COVID	0.340***	0.232***	0.184**	0.417***	0.433**
	(0.063)	(0.085)	(0.079)	(0.110)	(0.182)
Same department coauthor share × COVID	-0.342***				
	(0.117)				
Finance coauthor share × COVID		-0.014			
		(0.095)			
Top 11-25 department coauthor share × COVID			-0.029		
			(0.107)		
Top 10 department coauthor share × COVID			-0.045		
			(0.127)		
Associate professor coauthor share × COVID				-0.169	
				(0.101)	
Full professor coauthor share × COVID				-0.204***	
				(0.076)	
Age 35-49 coauthor share × COVID					-0.008
					(0.150)
Age 50+ coauthor share × COVID					-0.016
					(0.163)
Female under 35 coauthor share × COVID					0.544*
					(0.289)
Female 35-49 coauthor share × COVID					-0.227
					(0.160)
Female 50+ coauthor share × COVID					-0.213
					(0.324)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Finance × COVID fixed effects	No	Yes	No	No	No
Department rank × COVID fixed effects	No	No	Yes	No	No
Associate and full prof. × COVID fixed effects	No	No	No	Yes	No
Gender × age × COVID fixed effects	No	No	No	No	Yes
Observations	106,752	80,512	80,512	81,296	81,296
R^2	0.062	0.057	0.057	0.057	0.057
Mean productivity (papers per year)	1.218	1.335	1.335	1.330	1.330

This table replicates Table 8 using the recent rankings sample described in Table IA.3.

Table IA.46
Research production changes by coauthor network, demographic, and professional characteristics (alternative rankings)

	(1)	(2)	(3)	(4)	(5)
COVID	0.295***	0.231***	0.395***	0.390***	0.334**
	(0.059)	(0.059)	(0.139)	(0.116)	(0.132)
Between centrality × COVID	0.298***	0.285***	0.297***		0.285***
	(0.063)	(0.058)	(0.061)		(0.057)
Top 11-25 department × COVID		0.071		0.071	0.066
		(0.069)		(0.068)	(0.069)
Top 10 department × COVID		0.138***		0.252***	0.125**
		(0.050)		(0.068)	(0.049)
Age 35-49 × COVID			-0.063	-0.078	-0.060
			(0.123)	(0.109)	(0.121)
Age 50+ × COVID			-0.104	-0.174	-0.102
			(0.119)	(0.114)	(0.118)
Female × age under 35 × COVID			0.096	0.051	0.086
			(0.177)	(0.176)	(0.178)
Female × age 35-49 × COVID			-0.349***	-0.365***	-0.345***
			(0.102)	(0.103)	(0.102)
Female × age 50+ × COVID			-0.043	-0.075	-0.049
			(0.110)	(0.106)	(0.110)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	No	Yes	Yes	Yes	Yes
Observations	108,252	108,252	108,252	113,788	108,252
R^2	0.063	0.063	0.063	0.065	0.064
Mean productivity (papers per year)	1.206	1.206	1.206	1.168	1.206

This table replicates Table 9 using the recent rankings sample described in Table IA.3.

Table IA.47
Impact of COVID over time (alternative rankings)

	(1)	(2)	(3)	(4)	(5)
COVID (early)	0.629***	0.593***	0.447***	0.957***	0.578***
	(0.113)	(0.082)	(0.115)	(0.275)	(0.117)
COVID (middle)	0.255***	0.158***	0.127**	0.355**	0.196***
	(0.044)	(0.039)	(0.048)	(0.159)	(0.047)
COVID (late)	0.185***	0.050*	0.179***	0.235**	0.130**
	(0.055)	(0.029)	(0.057)	(0.104)	(0.063)
COVID (extended)	0.062	0.007	0.103	0.102	0.040
	(0.137)	(0.122)	(0.130)	(0.136)	(0.141)
Finance × COVID (early)		0.102			
		(0.147)			
Finance × COVID (middle)		0.270***			
		(0.085)			
Finance × COVID (late)		0.370**			
		(0.141)			
Finance × COVID (extended)		0.153*			
		(0.091)			
Top 10 department × COVID (early)			0.514***		
			(0.097)		
Top 10 department × COVID (middle)			0.278***		
			(0.080)		
Top 10 department × COVID (late)			0.021		
			(0.055)		
Top 10 department × COVID (extended)			-0.133*		
			(0.072)		
Female × age 35-49 × COVID (early)				-0.723***	
				(0.176)	
Female × age 35-49 × COVID (middle)				-0.292***	
				(0.089)	
Female × age 35-49 × COVID (late)				-0.145	
				(0.156)	
Female × age 35-49 × COVID (extended)				-0.187*	
				(0.109)	
Between centrality × COVID (early)					0.567***
					(0.022)
Between centrality × COVID (middle)					0.237***
					(0.073)
Between centrality × COVID (late)					0.088***
					(0.017)
Between centrality × COVID (extended)					0.097
					(0.124)
Author fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year fixed effects	Yes	Yes	Yes	Yes	Yes
Month of year × covariates fixed effects	No	Yes	Yes	Yes	No
Top 11-25 department × COVID sub-period fixed effects	No	No	Yes	No	No
Gender × age × COVID sub-period fixed effects	No	No	No	Yes	No
Observations	122,232	122,232	122,232	122,232	116,172
R^2	0.065	0.065	0.065	0.066	0.065
Mean productivity (papers per year)	1.166	1.166	1.166	1.166	1.204

This table replicates Table **10** using the recent rankings sample described in Table IA.**3**.

Table IA.48
Changes in quality metrics following COVID: Inverse hyperbolic sine transformation

Panel A: Citations per paper

	(1) All papers	(2) All papers	(3) Non-COVID papers	(4) Non-COVID papers
COVID	0.314***	0.277**	0.113	0.089
	(0.120)	(0.120)	(0.114)	(0.116)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,375	1,375	1,222	1,222
R^2	0.005	0.008	0.008	0.011
Mean of transformed dependent variable	1.052	1.052	0.904	0.904

Panel B: Downloads per paper

	(1) All papers	(2) All papers	(3) Non-COVID papers	(4) Non-COVID papers
COVID	0.158	0.100	0.061	0.016
	(0.184)	(0.184)	(0.188)	(0.187)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,375	1,375	1,222	1,222
R^2	0.004	0.006	0.013	0.017
Mean of transformed dependent variable	4.894	4.894	4.775	4.775

This table reports coefficients from OLS regressions where the outcome variable is the inverse hyperbolic sine transformation of citations (Panel A) or downloads (Panel B) from SSRN as of July 2022. Observations are at the paper level. The sample consists of papers by economics and finance faculty at top-50 U.S. departments which were posted from November 2019 to June 2020. Regressions include either linear or quadratic time trend controls. Columns (1) and (2) include all papers, while Columns (3) and (4) include only non-COVID research papers. $COVID$ is an indicator variable that takes the value of one starting in March 2020. Heteroskedasticity-robust standard errors are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.

Table IA.49
Changes in quality metrics following COVID: Inverse hyperbolic sine transformation (50th percentile regressions)

Panel A: Citations per paper

	(1) All papers	(2) All papers	(3) Non-COVID papers	(4) Non-COVID papers
COVID	0.245	0.204	0.148	0.114
	(0.182)	(0.185)	(0.168)	(0.169)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,375	1,375	1,222	1,222
R^2	0.001	0.003	0.004	0.007

Panel B: Downloads per paper

	(1) All papers	(2) All papers	(3) Non-COVID papers	(4) Non-COVID papers
COVID	0.196	0.121	0.175	0.101
	(0.278)	(0.282)	(0.290)	(0.290)
Linear time trend	Yes	Yes	Yes	Yes
Quadratic time trend	No	Yes	No	Yes
Sample time window	8 months	8 months	8 months	8 months
Observations (papers)	1,375	1,375	1,222	1,222
R^2	0.002	0.004	0.007	0.011

This table reports coefficients for quantile regressions for the median percentile. The outcome variable is the inverse hyperbolic sine transformation of citations (Panel A) or downloads (Panel B) from SSRN as of July 2022. Observations are at the paper level. The sample consists of papers by economics and finance faculty at top-50 U.S. departments which were posted from November 2019 to June 2020. Regressions include either linear or quadratic time trend controls. Columns (1) and (2) include all papers, while Columns (3) and (4) include only non-COVID research papers. $COVID$ is an indicator variable that takes the value of one starting in March 2020. Heteroskedasticity-robust standard errors are reported in parentheses. * indicates 10% significance, ** indicates 5% significance, and *** indicates 1% significance.