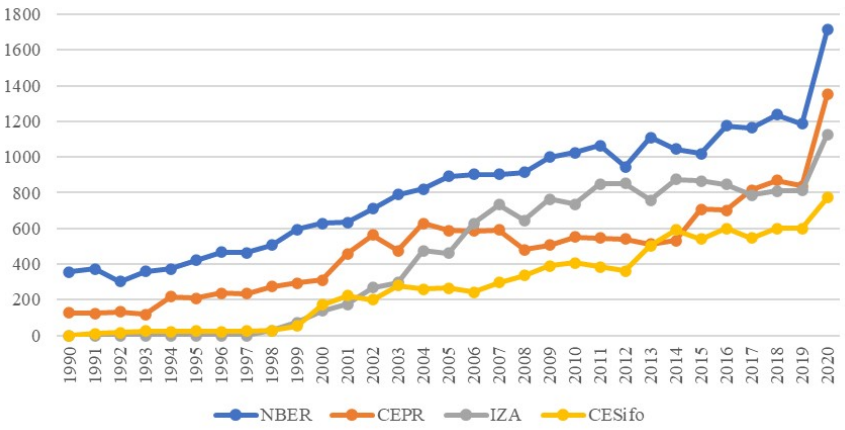
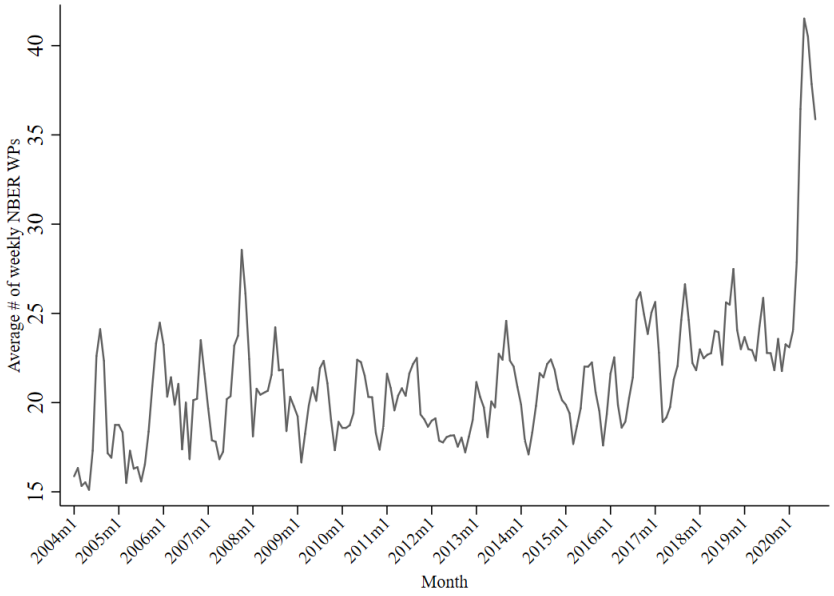
Online Appendix: Additional Tables and Figures

Figure A1: Time series of number of working paper releases

(a) Number of annual working papers from four leading working paper sources



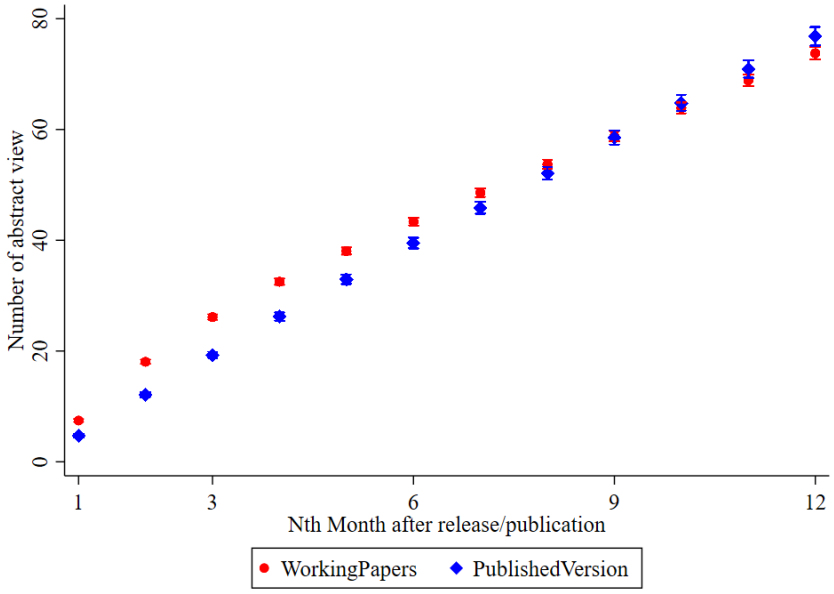
(b) Number of weekly NBER working paper releases



Notes: Data for (a) come from Citation in Economics (CitEc, citec.repec.org). For (b), for each month since January 2004, we first calculate the average number of weekly NBER WPs released. The figure then plots a simple three month moving average of this measure.

Figure A2: Accumulated viewership and downloads of NBER WPs versus their published counterparts over time

(a) Abstract views



(b) Downloads

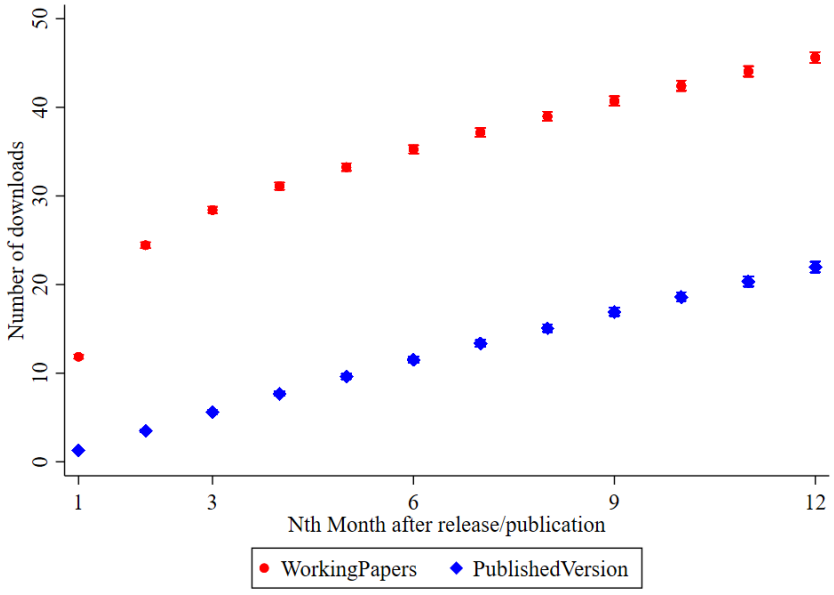


Figure A3: Residuals from regression of weekly # of NBER WPs on week and year fixed effects

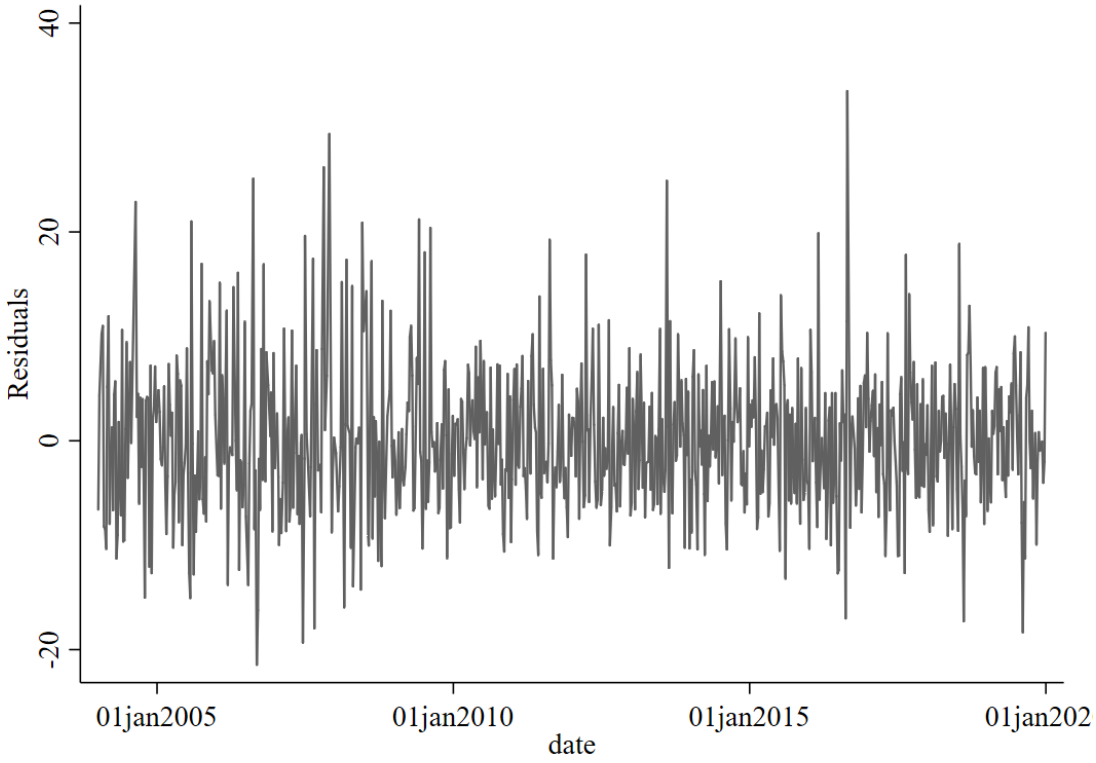
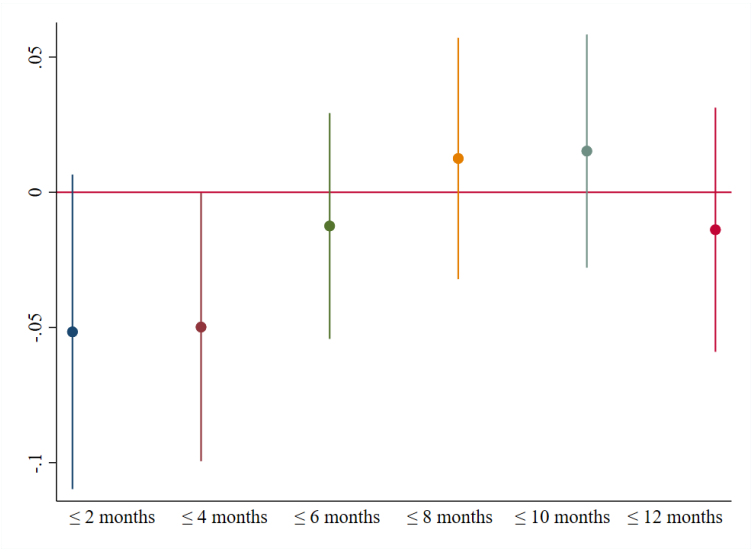
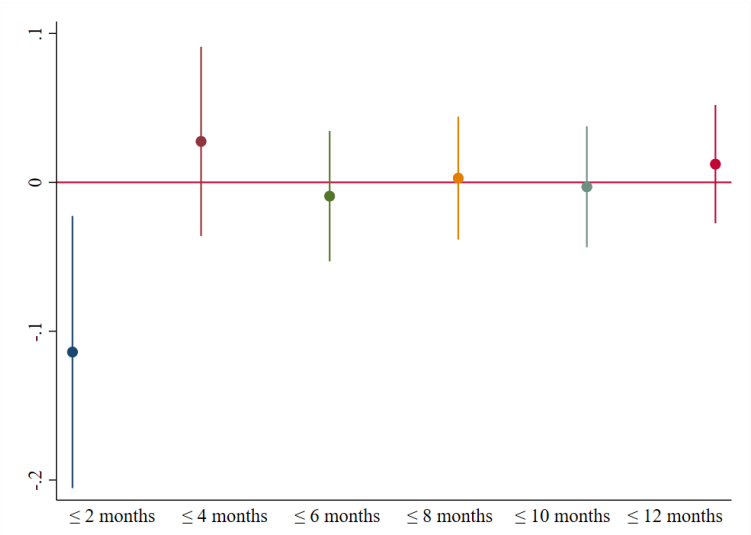


Figure A4: Impacts of number of weekly NBER WPs dissipate over time

(a) ln(Abstract views)



(b) ln(Downloads)



Notes: Each point reflects a separate regression where the outcome differs by the time frame of accumulated abstract views or downloads. For example, the first point in (a) comes from specification (1) where the outcome is the log of abstract views within the first two months of the paper's release. The second point covers abstract views within four months of the paper's release. 95% confidence intervals included.

Table A1: Abstract views and downloads in the first 6 months (Sample: WPs which eventually publish)

	(1)	(2)	(3)	(4)
	ln(# of Abstract views)		ln(# of Downloads)	
ln(# of NBER WPs)	-0.057	-0.044	-0.077	-0.067
	(0.024)	(0.023)	(0.035)	(0.035)
# of co-authors		-0.002		-0.019
		(0.007)		(0.010)
max(# of prior NBER WPs)		0.005		0.003
		(0.001)		(0.001)
mean(# of prior NBER WPs)		0.002		0.006
		(0.001)		(0.001)
Observations	11,153	11,153	11,153	11,153
R-squared	0.368	0.457	0.054	0.166
Week FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Program FE		Y		Y

Notes: Observations unique at the paper level. The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. Even columns additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.

Table A2: Publication and Citations(Sample: WPs which eventually publish in ranked economics journals)

	(1)	(2)	(3)	(4)	(5)	(6)
	Published		ln(Citations)		ln(Publication ranks)	
ln(# of NBER WPs)	-2.553	-2.552	-0.106	-0.075	-0.049	-0.052
	(1.075)	(1.067)	(0.033)	(0.031)	(0.053)	(0.046)
# of co-authors		0.988		0.119		-0.069
		(0.483)		(0.013)		(0.021)
max(# of prior NBER WPs)		0.000		0.001		0.003
		(0.031)		(0.001)		(0.001)
mean(# of prior NBER WPs)		-0.005		0.003		0.003
		(0.050)		(0.002)		(0.002)
Observations	12,784	12,784	12,784	12,784	8,752	8,752
R-squared	0.041	0.047	0.060	0.189	0.017	0.209
Week FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Program FE		Y		Y		Y

Notes: Observations unique at the paper level. Even columns additionally control for manuscript length (in number of words). Sample for Columns 1 through 4 restricted to years through 2017 to allow adequate time for publication and citation accumulation. Indicator for "Published" scaled to 0 or 100 for ease of interpretation; for example, from column (2), doubling the number of weekly NBER WPs reduces a paper's likelihood of publishing by 2.1 percentage points. Sample for Columns 5 and 6 restricted to papers released through 2017 and eventually published. It includes those that published in a ranked economics journal on ideas.repec.org/top/top.journals.all.html. The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. Standard errors clustered at the week-year level.

Table A3: Heterogeneous analysis with total # of WPs released by authors

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.037	-0.032	-4.274	-0.034	-0.094	-1.253	-0.066
	(0.027)	(0.038)	(1.522)	(0.012)	(0.035)	(1.425)	(0.040)
Interaction term	-0.035	-0.088	-1.440	-0.006	-0.039	-3.092	-0.038
	(0.052)	(0.060)	(2.374)	(0.018)	(0.056)	(3.164)	(0.091)
sum(# of prior NBER WPs)	0.585	0.604	10.833	0.054	0.260	27.572	1.017
	(0.175)	(0.198)	(7.959)	(0.061)	(0.187)	(10.710)	(0.309)
# of co-authors	-0.021	-0.033	0.034	0.000	0.002	-0.161	0.074
	(0.006)	(0.008)	(0.331)	(0.002)	(0.007)	(0.486)	(0.013)
max(# of prior NBER WPs)	-0.000	-0.001	-0.064	-0.001	-0.002	-0.196	-0.008
	(0.001)	(0.001)	(0.034)	(0.000)	(0.001)	(0.047)	(0.001)
mean(# of prior NBER WPs)	0.001	0.005	0.015	0.000	0.000	-0.012	0.001
	(0.001)	(0.001)	(0.032)	(0.000)	(0.001)	(0.047)	(0.001)
Observations	16,402	16,402	16,402	16,402	16,402	13,962	13,962
R-squared	0.449	0.157	0.190	0.185	0.211	0.051	0.198
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. "Interaction term" interacts "ln(# of NBER WPs)" with "sum(# of prior NBER WPs)", where "sum(# of prior NBER WPs)" measures the summation of # of prior released WPs across all authors. Coefficients are scaled by 100 for ease of presentation. Standard errors clustered at the week-year level.

Table A4: Heterogeneous analysis with rank of authors

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.049	-0.087	-4.349	-0.033	-0.102	-3.512	-0.126
	(0.026)	(0.035)	(1.473)	(0.011)	(0.032)	(1.472)	(0.044)
Interaction term	0.000	0.002	-0.028	-0.000	-0.000	0.109	0.004
	(0.001)	(0.002)	(0.062)	(0.000)	(0.001)	(0.088)	(0.002)
min(rank of author)	-0.013	-0.018	0.063	0.001	0.001	-0.515	-0.034
	(0.005)	(0.005)	(0.195)	(0.002)	(0.004)	(0.277)	(0.007)
# of co-authors	-0.011	-0.029	0.322	0.002	0.009	0.520	0.093
	(0.006)	(0.007)	(0.309)	(0.002)	(0.006)	(0.450)	(0.012)
max(# of prior NBER WPs)	0.002	0.000	-0.006	-0.000	-0.000	-0.049	-0.003
	(0.000)	(0.001)	(0.021)	(0.000)	(0.000)	(0.030)	(0.001)
mean(# of prior NBER WPs)	0.002	0.005	0.027	0.000	0.001	0.015	0.002
	(0.001)	(0.001)	(0.031)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.466	0.169	0.190	0.185	0.211	0.051	0.218
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. "Interaction term" interacts "ln(# of NBER WPs)" with "min(rank of author)", where "min(rank of author)" measures the highest rank of authors from IDEAS aggregated all time author rankings (ideas.repec.org/top/top.person.all.html). Coefficients are scaled by 100 for ease of presentation. Standard errors clustered at the week-year level.

Table A5: Quantile regressions on viewership and citations

	(1)	(2)	(3)	(4)	(5)
	q10	q25	q50	q75	q90
			Abstract views in the first 6 months		
ln(# of NBER WPs)	-0.035	-0.047	-0.018	-0.026	-0.090
	(0.034)	(0.025)	(0.024)	(0.035)	(0.042)
			Downloads in the first 6 months		
ln(# of NBER WPs)	-0.031	-0.077	-0.044	-0.061	-0.035
	(0.052)	(0.041)	(0.033)	(0.034)	(0.035)
			Citations		
ln(# of NBER WPs)	0.000	-0.039	-0.043	-0.082	-0.143
	(0.000)	(0.038)	(0.038)	(0.044)	(0.062)
Observations	16,403	16,403	16,403	16,403	16,403
Week FE	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. Standard errors clustered at the week-year level.

Table A6: Month-Year FE

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.041	-0.063	-3.854	-0.033	-0.092	-2.484	-0.023
	(0.017)	(0.025)	(1.207)	(0.010)	(0.028)	(1.021)	(0.028)
# of co-authors	0.003	-0.015	0.516	0.003	0.013	0.636	0.118
	(0.006)	(0.007)	(0.296)	(0.002)	(0.006)	(0.447)	(0.013)
max(# of prior NBER WPs)	0.005	0.003	-0.008	-0.000	-0.000	-0.015	0.001
	(0.000)	(0.000)	(0.019)	(0.000)	(0.000)	(0.029)	(0.001)
mean(# of prior NBER WPs)	0.002	0.006	0.040	0.000	0.001	0.021	0.003
	(0.001)	(0.001)	(0.030)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.466	0.200	0.261	0.272	0.294	0.061	0.205
Week FE	Y	Y	Y	Y	Y	Y	Y
Month-Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. All regressions additionally control for manuscript length (in number of words). The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. Standard errors clustered at the week-year level.

Table A7: Quarter-Year FE

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.048	-0.055	-4.666	-0.037	-0.108	-2.241	-0.057
	(0.018)	(0.026)	(1.286)	(0.010)	(0.029)	(1.027)	(0.029)
# of co-authors	0.003	-0.017	0.518	0.003	0.013	0.665	0.118
	(0.006)	(0.007)	(0.296)	(0.002)	(0.006)	(0.447)	(0.012)
max(# of prior NBER WPs)	0.005	0.003	-0.006	-0.000	-0.000	-0.014	0.001
	(0.000)	(0.000)	(0.020)	(0.000)	(0.000)	(0.029)	(0.001)
mean(# of prior NBER WPs)	0.002	0.006	0.037	0.000	0.001	0.021	0.003
	(0.001)	(0.001)	(0.031)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.457	0.180	0.234	0.239	0.262	0.053	0.197
Week FE	Y	Y	Y	Y	Y	Y	Y
Quarter-Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. All regressions additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.

Table A8: Publication and citations: Robustness to different sample years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Published				ln(# of citations)			
	$\leq$ 2015	$\leq$ 2016	$\leq$ 2018	$\leq$2019	$\leq$ 2015	$\leq$ 2016	$\leq$ 2018	$\leq$2019
ln(# of NBER WPs)	-1.895	-1.891	-2.014	-1.710	-0.061	-0.071	-0.067	-0.068
	(1.124)	(1.042)	(1.004)	(0.995)	(0.034)	(0.031)	(0.028)	(0.028)
# of co-authors	0.746	0.864	0.716	0.710	0.108	0.111	0.113	0.111
	(0.484)	(0.475)	(0.421)	(0.400)	(0.015)	(0.013)	(0.011)	(0.011)
max(# of prior NBER WPs)	-0.037	-0.025	-0.024	-0.034	0.001	0.001	0.001	0.001
	(0.031)	(0.031)	(0.027)	(0.026)	(0.001)	(0.001)	(0.001)	(0.001)
mean(# of prior NBER WPs)	0.080	0.046	0.033	0.066	0.003	0.003	0.002	0.002
	(0.049)	(0.048)	(0.043)	(0.042)	(0.002)	(0.001)	(0.001)	(0.001)
Observations	11,645	12,802	15,208	16,403	11,645	12,802	15,208	16,403
R-squared	0.021	0.034	0.093	0.150	0.171	0.183	0.212	0.248
Week FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. Table tests various sample restrictions by year to allow adequate time for publication and citation accumulation. The primary covariate of interest "# of NBER WPs" measures the total number of released NBER WPs during the week that an observed paper was released. All regressions additionally control for manuscript length (in number of words). Indicator for "Published" scaled to 0 or 100 for ease of interpretation; for example, from column (5), doubling the number of weekly NBER WPs reduces a paper's likelihood of publishing by 1.7 percentage points. Standard errors clustered at the week-year level.

Table A9: Author dummies(include authors with at least 2 NBER WPs)

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.046	-0.068	-3.831	-0.030	-0.089	-2.200	-0.097
	(0.022)	(0.032)	(1.342)	(0.010)	(0.029)	(1.382)	(0.036)
# of co-authors	0.001	-0.028	-0.701	-0.004	-0.013	-1.155	-0.008
	(0.010)	(0.014)	(0.624)	(0.005)	(0.013)	(0.906)	(0.023)
max(# of prior NBER WPs)	0.003	-0.001	0.055	0.000	0.002	-0.143	-0.005
	(0.001)	(0.001)	(0.052)	(0.000)	(0.001)	(0.079)	(0.002)
mean(# of prior NBER WPs)	0.006	0.009	-0.020	-0.000	-0.001	0.014	0.007
	(0.001)	(0.001)	(0.054)	(0.000)	(0.001)	(0.079)	(0.002)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.712	0.535	0.495	0.500	0.520	0.457	0.583
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y
Author dummy	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. Standard errors clustered at the week-year level.

Table A10: Placebo test: Regression of next week's number of NBER WPs on today's paper's outcomes

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)_lead1	-0.036	-0.027	-0.898	-0.006	-0.018	0.540	-0.026
	(0.018)	(0.026)	(0.995)	(0.008)	(0.023)	(0.805)	(0.025)
# of co-authors	0.003	-0.016	0.380	0.002	0.010	0.744	0.119
	(0.006)	(0.007)	(0.311)	(0.002)	(0.006)	(0.448)	(0.012)
max(# of prior NBER WPs)	0.005	0.003	0.000	-0.000	-0.000	-0.015	0.001
	(0.000)	(0.000)	(0.020)	(0.000)	(0.000)	(0.029)	(0.001)
mean(# of prior NBER WPs)	0.002	0.006	0.027	0.000	0.001	0.023	0.003
	(0.001)	(0.001)	(0.031)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.445	0.155	0.188	0.183	0.209	0.049	0.194
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. For the placebo test, we take the subsequent week's "# of NBER WPs," which measures the total number of released NBER WPs during the subsequent week that an observed paper was released. All regressions additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.

Table A11: Regression of weekly # of "top author" WPs

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(# of NBER WPs)	-0.080	-0.119	-5.250	-0.045	-0.127	-3.999	-0.289
	(0.024)	(0.038)	(1.760)	(0.014)	(0.040)	(1.259)	(0.035)
ln(# of "top author" WPs)	0.039	0.071	0.628	0.010	0.025	2.200	0.254
	(0.017)	(0.027)	(1.281)	(0.011)	(0.030)	(0.980)	(0.024)
# of co-authors	0.003	-0.017	0.349	0.002	0.009	0.725	0.118
	(0.006)	(0.007)	(0.311)	(0.002)	(0.006)	(0.446)	(0.012)
max(# of prior NBER WPs)	0.005	0.003	-0.001	-0.000	-0.000	-0.017	0.001
	(0.000)	(0.000)	(0.020)	(0.000)	(0.000)	(0.029)	(0.001)
mean(# of prior NBER WPs)	0.002	0.006	0.028	0.000	0.001	0.023	0.003
	(0.001)	(0.001)	(0.031)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.446	0.156	0.190	0.185	0.211	0.050	0.199
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. The primary covariate of interest "Weekly max(# of prior NBER WPs)" measures the maximum number of previously released NBER WPs across that week's authors. # of "top author" WPs is defined as following: (1) For each year, identify the "top" papers (top 90 percentile) according to citations. (2) Identify the NBER affiliates on these top papers, and call these "top authors" for that year. (3) For each week, count the number of papers that week that had a "top author". All regressions additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.

Table A12: Regression of weekly max # of prior WPs

	(1) Abstract views	(2) Downloads	(3) Attention Dummy	(4) # of media outlets	(5) Att Score	(6) Published	(7) Citations
ln(Weekly max(# of prior NBER WPs))	-0.031	-0.047	1.377	0.005	0.023	-0.251	-0.042
	(0.019)	(0.028)	(1.475)	(0.012)	(0.034)	(1.020)	(0.029)
# of co-authors	0.003	-0.016	0.381	0.002	0.010	0.741	0.119
	(0.006)	(0.007)	(0.310)	(0.002)	(0.006)	(0.448)	(0.012)
max(# of prior NBER WPs)	0.005	0.003	-0.001	-0.000	-0.000	-0.015	0.001
	(0.000)	(0.000)	(0.020)	(0.000)	(0.000)	(0.029)	(0.001)
mean(# of prior NBER WPs)	0.002	0.006	0.027	0.000	0.001	0.023	0.003
	(0.001)	(0.001)	(0.031)	(0.000)	(0.001)	(0.046)	(0.001)
Observations	16,403	16,403	16,403	16,403	16,403	13,963	13,963
R-squared	0.445	0.155	0.188	0.183	0.209	0.049	0.194
Week FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
Program FE	Y	Y	Y	Y	Y	Y	Y

Notes: Observations unique at the paper level. The primary covariate of interest "Weekly max(# of prior NBER WPs)" measures the maximum number of previously released NBER WPs across that week's authors. All regressions additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.

Table A13: Poisson regression on count outcomes

	(1) Abstract views	(2) Downloads	(3) # of media outlets	(4) Citations
ln(# of NBER WPs)	-0.057	-0.067	-0.457	-0.145
	(0.028)	(0.031)	(0.243)	(0.051)
# of co-authors	-0.006	-0.033	0.097	0.094
	(0.009)	(0.008)	(0.050)	(0.026)
max(# of prior NBER WPs)	0.005	0.003	-0.010	0.004
	(0.001)	(0.001)	(0.004)	(0.001)
mean(# of prior NBER WPs)	0.002	0.005	0.017	0.003
	(0.001)	(0.001)	(0.006)	(0.002)
Observations	16,403	16,403	16,372	13,963
Week FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Program FE	Y	Y	Y	Y

Notes: Observations unique at the paper level. The primary covariate of interest "Weekly max(# of prior NBER WPs)" measures the maximum number of previously released NBER WPs across that week's authors. In column (3), 31 observations missing because # of media outlets stays 0 for calendar week 53. All regressions additionally control for manuscript length (in number of words). Standard errors clustered at the week-year level.