1 Figures
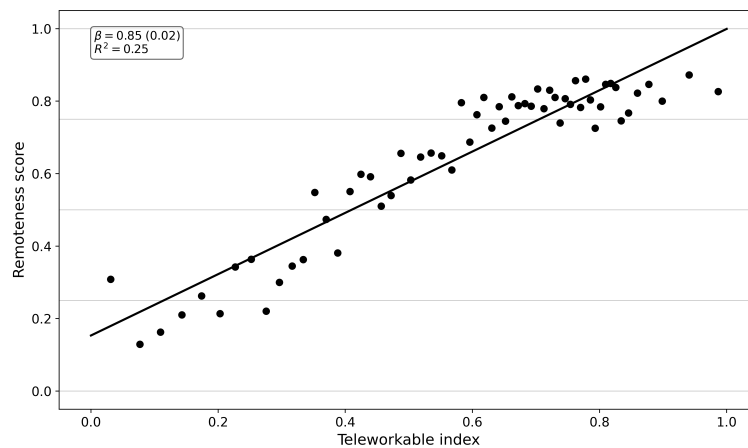

Figure 1: Remote v. Teleworkabe Scores
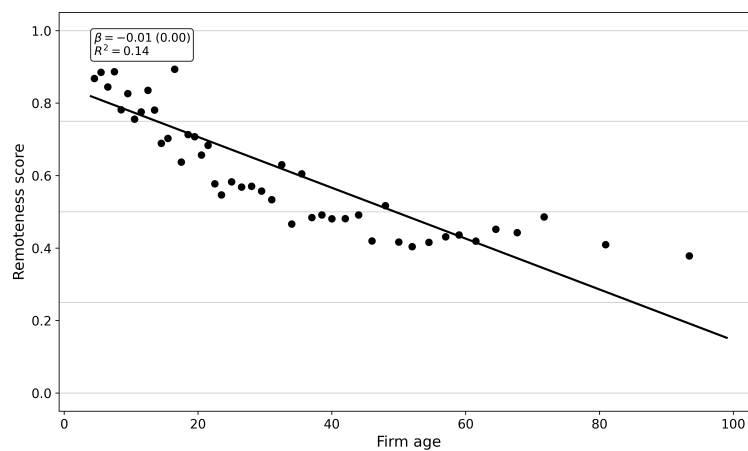

Figure 2: Remote v. Firm Age

2 Table of Means

Table 1: Table of Means

	Startup	Incumbent	All Firms
Panel A: Firm-level			
Growth	0.20	0.06	0.09
	(0.31)	(0.16)	(0.22)
Leave	0.26	0.21	0.22
	(0.31)	(0.28)	(0.29)
Join	0.35	0.17	0.22
	(0.32)	(0.18)	(0.24)
Teleworkable Score (0–1)	0.67	0.54	0.57
	(0.18)	(0.25)	(0.24)
Remote Score (0–1)	0.85	0.57	0.64
	(0.30)	(0.41)	(0.40)
Employees (Count)	271	2740	2126
	(1432)	(9555)	(8380)
Age	7	43	34
	(2)	(34)	(33)
Rent ($/sq ft)	49	37	40
	(21)	(19)	(20)
Centrality Score	1419	949	1066
	(1830)	(1309)	(1470)
Seniority Levels (Count)	3.62	3.86	3.80
	(0.77)	(0.50)	(0.59)
Number of firms	878	2630	3508
Observations	10450	31530	41980
Panel B: User-level			
Total Contributions	362.95	192.73	225.70
	(817.44)	(522.28)	(594.89)
Restricted Contributions	320.05	139.96	174.84
	(746.65)	(359.56)	(466.14)
Number of firms	721	1503	2224
Number of users	8338	31993	37186
Observations	44801	186504	231305

Notes: Panel A uses firm–half–year observations. Panel B relies on worker–half–year observations. "Number of firms" counts distinct firm IDs that ever appear in each category over the full sample window, so Startup and Incumbent counts need not sum to the "All" column. *Growth*, *Leave*, and *Join* rates are fractions between 0 and 1. *Teleworkable* and *Remote* scores are index values between 0 and 1. The sample period spans 2016 H2–2022 H1 at the firm level and 2017 H1–2022 H1 at the user level.

3 User Productivity – Pre-COVID Panel

3.1 OLS

Table 2: User Productivity – OLS

	(1)	(2)	(3)	(4)	(5)	(6)
	Total (pct. rk.)	Total (pct. rk.)	Total (pct. rk.)	Restr. (pct. rk.)	Total (wins.)	Restr. (wins.)
Remote $\times$ $\mathbb{1}$(Post)	-0.28 (0.44)	-1.03** (0.48)	-1.23** (0.50)	-1.48*** (0.52)	-19.74*** (4.66)	-17.33*** (3.91)
Remote $\times$ $\mathbb{1}$(Post) $\times$ Startup		5.18*** (1.24)	6.21*** (1.27)	7.31*** (1.27)	59.23*** (14.22)	55.41*** (12.74)
Time FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓				
User FE	✓	✓				
Firm $\times$ User FE			✓	✓	✓	✓
Pre-COVID mean	49.92	49.92	49.92	48.48	184.71	138.15
N	229,862	229,862	224,708	224,708	224,708	224,708

3.2 Instrumental Variables

Table 3: User Productivity – IV

	(1)	(2)	(3)	(4)	(5)	(6)
	Total (pct. rk.)	Total (pct. rk.)	Total (pct. rk.)	Restr. (pct. rk.)	Total (wins.)	Restr. (wins.)
Remote $\times$ $\mathbb{1}$(Post)	-3.61 (2.82)	-7.15* (3.90)	-9.26** (4.01)	-6.75 (4.19)	-124.39*** (33.82)	-105.59*** (28.11)
Remote $\times$ $\mathbb{1}$(Post) $\times$ Startup		9.94* (5.37)	12.45** (5.39)	10.52* (5.42)	130.92** (55.14)	108.20** (48.92)
Time FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓				
User FE	✓	✓				
Firm $\times$ User FE			✓	✓	✓	✓
Pre-COVID mean	49.92	49.92	49.92	48.48	184.71	138.15
KP rk Wald F	543.26	140.60	123.43	123.43	123.43	123.43
N	229,862	229,862	224,708	224,708	224,708	224,708

3.3 First Stage

Table 4: First-Stage Estimates – User Productivity (precovid)

	Remote $\times \mathbb{1}$(Post)	Remote $\times \mathbb{1}$(Post) $\times$ Startup
Teleworkable $\times \mathbb{1}$(Post)	0.23***	-0.00*
	(0.01)	(0.00)
Teleworkable $\times \mathbb{1}$(Post) $\times$ Startup	0.16***	0.39***
	(0.02)	(0.02)
$\mathbb{1}$(Post) $\times$ Startup	0.09***	0.60***
	(0.02)	(0.01)
Time FE	✓	✓
Firm FE	✓	✓
User FE	✓	✓
Partial F	325.46	186.55
N	229,862	229,862

4 User Productivity – Heterogeneity Splits

4.1 Modal vs. Non-Modal MSA

Each row is tagged as "**in modal MSA**" if the worker's CBSA equals the firm's most common CBSA. We then re-estimate the IV separately for the three groups: **1** = inside the modal market, **0** = outside, and **2** = cases where the worker's CBSA is missing ("empty").

Table 5: Modal MSA heterogeneity

Parameter	0	1	2
Remote $\times \mathbb{1}(\text{Post})$	-5.397	-14.685	-8.418
	(4.536)	(12.461)	(8.151)
Remote $\times \mathbb{1}(\text{Post}) \times$ Startup	18.970**	16.135	11.198
	(7.396)	(16.998)	(9.863)
N	72,334	95,685	54,895
KP rk Wald F	102.35	13.29	28.09

4.2 Distance Terciles

For every worker we compute her
emphaverage haversine distance to the company headquarters across the panel horizon (in km). Firms are then sorted into terciles based on that firm–level mean and the code is merged back to the worker panel. The regressions are re–estimated separately for the short- ("1"), medium- ("2") and long–distance ("3") buckets.

Table 6: Distance heterogeneity

Parameter	1	2	3
Remote $\times \mathbb{1}(\text{Post})$	-22.315***	-17.570*	-2.737
	(6.835)	(10.544)	(4.940)
Remote $\times \mathbb{1}(\text{Post}) \times$ Startup	10.143	31.297**	6.629
	(17.334)	(13.517)	(6.474)
N	27,504	49,129	147,989
KP rk Wald F	13.88	14.01	103.68

4.3 Dynamic Labour-Growth (within half-year)

Using the Scoop employment time–series we calculate the semi–annual growth rate $g_{ft} = \frac{E_{ft}}{E_{f,t-1}} - 1$ for every firm f and half–year t. Within each half–year we split firms into employment–growth terciles and assign the resulting indicator

to all worker observations in that half–year. Bucket "1" thus represents firms with below–median
emphconcurrent employment growth, bucket "3" the top tercile.

Table 7: Dynamic growth heterogeneity

Parameter	1	2	3
Remote $\times \math1(\text{Post})$	-21.670***	-1999.185	-0.061
	(8.314)	(47319.406)	(3.690)
Remote $\times \math1(\text{Post}) \times$ Startup	16.986*	2060.627	-4.698
	(9.466)	(48326.980)	(6.619)
N	36,785	95,617	66,963
KP rk Wald F	31.22	0.00	51.93

4.4 Pre vs. Post-COVID Labour-Growth

Here the growth metric compares mean headcount
emphbefore 2020H1 with mean headcount
emphafter. For each firm we compute $\frac{\bar{E}_{\text{post}} - \bar{E}_{\text{pre}}}{\bar{E}_{\text{pre}}}$, Winsorise it at the 1st/99th percentiles and split the cross–section of firms into terciles. The variable therefore captures the medium–run adjustment of firm size due to the pandemic, independent of intra–year fluctuations.

Table 8: Post-COVID growth heterogeneity

Parameter	1	2	3
Remote $\times \math1(\text{Post})$	-16.398**	6.876	-4.275
	(7.906)	(18.371)	(3.546)
Remote $\times \math1(\text{Post}) \times$ Startup	-17.303	-1.172	-0.158
	(21.480)	(18.738)	(7.519)
N	45,951	112,354	66,403
KP rk Wald F	29.49	5.77	28.78

∞

5 User Productivity – Covid Bifurcation (Full Remote, Pre-COVID Panel)

Table 9: User Productivity – Lean (Precovid, fullremote) – Part 1

Specification	Total Contrib. (pct. rk)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	-0.86***	-0.71**	-0.84***	-0.82***	-0.70**	-0.67**	-0.82***	-0.68**
	(0.31)	(0.32)	(0.31)	(0.31)	(0.32)	(0.32)	(0.31)	(0.32)
Remote × 𝟙(Post) × Startup	3.39***	2.79***	3.50***	3.35***	2.90***	2.75***	3.53***	2.91***
	(0.71)	(0.72)	(0.72)	(0.71)	(0.72)	(0.72)	(0.73)	(0.73)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote × 𝟙(Post)	-4.11**	-3.75*	-4.29**	-4.10**	-3.98**	-3.72*	-4.30**	-3.97**
	(1.77)	(1.96)	(1.72)	(1.80)	(1.92)	(2.01)	(1.77)	(2.00)
Remote × 𝟙(Post) × Startup	5.61**	4.97*	6.74***	5.53**	6.08**	4.91*	6.99**	6.32**
	(2.45)	(2.68)	(2.55)	(2.51)	(2.83)	(2.74)	(2.71)	(3.00)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
KP rk Wald F	311.51	247.30	326.09	299.86	253.61	236.73	306.94	234.74

6 User Mechanisms – Covid Bifurcation (Continuous) – Pre-COVID Panel

Table 10: User Mechanisms – Lean (Precovid) – Part 1

	Total Contrib. (pct. rk)					
Specification	(1)	(2)	(3)	(4)	(5)	(6)
Rent		✓			✓	✓
HHI			✓		✓	
Seniority				✓		✓
Panel A: OLS						
Remote × $\mathbb{1}$(Post)	-1.23**	-0.95*	-1.22**	-1.08**	-0.95*	-0.90*
	(0.50)	(0.51)	(0.50)	(0.51)	(0.51)	(0.52)
Remote × $\mathbb{1}$(Post) × Startup	6.21***	4.03***	6.39***	6.76***	4.21***	4.62***
	(1.27)	(1.26)	(1.28)	(1.32)	(1.27)	(1.31)
N	224,708	218,112	224,596	224,708	218,032	218,112
Panel B: IV						
Remote × $\mathbb{1}$(Post)	-9.26**	-9.23*	-9.72**	-13.82*	-9.97**	-15.05*
	(4.01)	(4.87)	(3.93)	(7.80)	(4.86)	(8.88)
Remote × $\mathbb{1}$(Post) × Startup	12.45**	11.76*	14.94***	26.14***	14.35**	26.68**
	(5.39)	(6.15)	(5.62)	(10.10)	(6.49)	(11.32)
N	224,708	218,112	224,596	224,708	218,032	218,112
KP rk Wald F	123.43	81.62	130.14	30.71	82.68	24.19

7 User Mechanisms – Covid Bifurcation (Binned) – Pre-COVID Panel

Table 11: User Mechanisms – Lean (Precovid) – Part 1

Specification	Total Contrib. (pct. rk)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	-1.23**	-0.93*	-1.28***	-1.19**	-0.99*	-0.88*	-1.24**	-0.94*
	(0.50)	(0.51)	(0.50)	(0.50)	(0.52)	(0.52)	(0.50)	(0.52)
Remote × 𝟙(Post) × Startup	6.21***	4.01***	6.22***	6.15***	4.05***	3.95***	6.18***	4.00***
	(1.27)	(1.26)	(1.27)	(1.28)	(1.26)	(1.27)	(1.28)	(1.27)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote × 𝟙(Post)	-9.26**	-8.49	-9.12**	-9.28**	-8.67	-8.47	-9.17**	-8.71
	(4.01)	(5.28)	(4.00)	(4.12)	(5.34)	(5.47)	(4.10)	(5.57)
Remote × 𝟙(Post) × Startup	12.45**	10.91*	12.62**	12.30**	11.26*	10.80	12.60**	11.27*
	(5.39)	(6.48)	(5.37)	(5.52)	(6.52)	(6.67)	(5.50)	(6.75)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
KP rk Wald F	123.43	68.32	123.26	117.48	66.46	63.68	117.24	61.39

8 User Mechanisms – Remote Bifurcation (Continuous) – Pre-COVID Panel

Table 12: User Mechanisms (Precovid) – Part 1

	Total Contrib. (pct. rk)							
Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	-1.03**	-1.94*	-0.57	4.11	-1.48	4.59	5.55	6.04
	(0.48)	(1.13)	(0.60)	(5.86)	(1.18)	(5.86)	(5.95)	(5.94)
Remote × 𝟙(Post) × Startup	5.25***	2.91**	5.64***	5.10***	3.35***	2.71**	5.47***	3.12**
	(1.24)	(1.24)	(1.29)	(1.24)	(1.28)	(1.24)	(1.29)	(1.28)
N	229,710	222,851	229,620	229,710	222,798	222,851	229,620	222,798
Panel B: IV								
Remote × 𝟙(Post)	-4.57	-2775.24	-98.17	88633.78	2183.05	39.59	5246.00	1651.21
	(3.39)	(11069.18)	(198.56)	(356887.66)	(9557.95)	(4560.50)	(17096.43)	(1963.50)
Remote × 𝟙(Post) × Startup	9.78*	259.56	-27.25	2571.92	-254.15	196.96	239.35	18.19
	(5.44)	(1034.96)	(77.53)	(10384.31)	(1451.85)	(446.61)	(527.34)	(505.58)
N	229,710	208,057	214,249	214,330	208,006	208,057	214,249	208,006
KP rk Wald F	180.13	0.02	0.08	0.02	0.01	0.04	0.04	0.02

9 User Mechanisms – Remote Bifurcation (Binned) – Pre-COVID Panel

Table 13: User Mechanisms (Precovid) – Part 1

Specification	Total Contrib. (pct. rk)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × $\mathbb{1}$(Post)	-1.23**	-1.11*	-1.54**	2.65	-1.21*	4.16	2.14	3.96
	(0.50)	(0.63)	(0.63)	(5.85)	(0.71)	(5.80)	(5.90)	(5.86)
Remote × $\mathbb{1}$(Post) × Startup	6.21***	4.08***	6.07***	6.09***	4.06***	3.90***	5.95***	3.88***
	(1.27)	(1.27)	(1.29)	(1.28)	(1.28)	(1.27)	(1.29)	(1.28)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote × $\mathbb{1}$(Post)	-9.26**	-990.04	-188.00**	-21799.94	-677.88	7540.44	5749.41	19936.89
	(4.01)	(3169.06)	(95.53)	(13665.66)	(982.93)	(13396.79)	(11264.50)	(149586.97)
Remote × $\mathbb{1}$(Post) × Startup	12.45**	-182.31	-14.51	-310.11	80.55	177.08	122.50	-67.96
	(5.39)	(642.58)	(16.54)	(255.37)	(85.79)	(266.43)	(200.54)	(1452.16)
N	224,708	203,754	209,684	209,788	203,676	203,754	209,684	203,676
KP rk Wald F	123.43	0.03	2.18	0.96	0.17	0.09	0.07	0.00

10 Firm Scaling

10.1 OLS

Table 14: Firm Scaling — OLS

	(1)	(2)	(3)	(4)
	Growth (wins.)	Growth (wins.)	Join (wins.)	Leave (wins.)
Remote $\times$ $\mathbb{1}$(Post)	0.01**	0.00	0.01**	0.02***
	(0.01)	(0.00)	(0.00)	(0.00)
Remote $\times$ $\mathbb{1}$(Post) $\times$ Startup		0.07***	0.05*	-0.01
		(0.02)	(0.03)	(0.01)
Time FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓
Pre-COVID mean	0.11	0.11	0.25	0.14
N	41,742	41,742	41,742	41,742

10.2 Instrumental Variables

Table 15: Firm Scaling — IV

	(1)	(2)	(3)	(4)
	Growth (wins.)	Growth (wins.)	Join (wins.)	Leave (wins.)
Remote $\times$ $\mathbb{1}$(Post)	0.02	-0.00	0.03***	0.04***
	(0.01)	(0.01)	(0.01)	(0.00)
Remote $\times$ $\mathbb{1}$(Post) $\times$ Startup		0.22**	0.23**	0.06
		(0.09)	(0.10)	(0.05)
Time FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓
Pre-COVID mean	0.11	0.11	0.25	0.14
KP rk Wald F	982.73	18.30	18.30	18.30
N	41,742	41,742	41,742	41,742

10.3 First Stage

Table 16: First-Stage Estimates – Firm Scaling

	Remote $\times \mathbb{1}$(Post)	Remote $\times \mathbb{1}$(Post) $\times$ Startup
Teleworkable $\times \mathbb{1}$(Post)	0.772***	-0.000
	(0.024)	(0.000)
Teleworkable $\times \mathbb{1}$(Post) $\times$ Startup	-0.349***	0.423***
	(0.074)	(0.070)
$\mathbb{1}$(Post) $\times$ Startup	0.446***	0.497***
	(0.065)	(0.063)
Time FE	✓	✓
Firm FE	✓	✓
Partial F	525.42	18.34
N	41,742	41,742

10.4 Remote → Teleworkable: First Stage

Table 17: First-Stage Estimate: Remote → Teleworkable

	Remote
Teleworkable	0.795***
	(0.021)
R^2	0.290
N	3,486

10.5 Firm Mechanisms – Covid Bifurcation (Continuous)

Table 18: Firm Mechanisms – Lean (Part 1)

	Growth Rate							
Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	0.003	0.003	0.004	0.001	0.004	0.001	0.000	0.000
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Remote × 𝟙(Post) × Startup	0.070***	0.067***	0.066***	0.070***	0.061**	0.066***	0.070***	0.065***
	(0.024)	(0.025)	(0.024)	(0.023)	(0.025)	(0.025)	(0.023)	(0.025)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
Panel B: IV								
Remote × 𝟙(Post)	0.006	0.013	0.008	0.003	0.015	0.009	0.002	0.008
	(0.009)	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Remote × 𝟙(Post) × Startup	0.209**	0.207*	0.188*	0.121	0.182	0.105	0.130	0.113
	(0.102)	(0.113)	(0.102)	(0.094)	(0.115)	(0.105)	(0.095)	(0.107)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
KP rk Wald F	16.53	14.39	15.27	16.46	13.05	14.37	15.67	13.57

10.6 Firm Mechanisms – Covid Bifurcation (Full Remote)

Table 19: Firm Mechanisms – Lean (Part 1)

	Growth Rate							
Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × $\mathbb{1}$(Post)	-0.004	-0.003	-0.006	-0.007*	-0.004	-0.006	-0.007	-0.006
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Remote × $\mathbb{1}$(Post) × Startup	0.055***	0.050***	0.057***	0.052***	0.052***	0.047***	0.057***	0.052***
	(0.017)	(0.018)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
Panel B: IV								
Remote × $\mathbb{1}$(Post)	0.007	0.020*	0.014	0.004	0.025**	0.016	0.012	0.021*
	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)
Remote × $\mathbb{1}$(Post) × Startup	0.182**	0.176*	0.124	0.110	0.107	0.089	0.112	0.092
	(0.091)	(0.102)	(0.086)	(0.087)	(0.096)	(0.098)	(0.089)	(0.100)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
KP rk Wald F	14.26	11.74	13.61	13.37	11.16	10.92	12.74	10.37

10.7 Firm Mechanisms – Covid Bifurcation (Binned)

Table 20: Firm Mechanisms – Lean (Part 1)

Specification	Growth Rate							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	0.003	0.003	0.004	0.001	0.004	0.001	0.000	0.000
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Remote × 𝟙(Post) × Startup	0.070***	0.067***	0.066***	0.070***	0.061**	0.066***	0.070***	0.065***
	(0.024)	(0.025)	(0.024)	(0.023)	(0.025)	(0.025)	(0.023)	(0.025)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
Panel B: IV								
Remote × 𝟙(Post)	0.006	0.013	0.008	0.003	0.015	0.009	0.002	0.008
	(0.009)	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Remote × 𝟙(Post) × Startup	0.209**	0.207*	0.188*	0.121	0.182	0.105	0.130	0.113
	(0.102)	(0.113)	(0.102)	(0.094)	(0.115)	(0.105)	(0.095)	(0.107)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
KP rk Wald F	16.53	14.39	15.27	16.46	13.05	14.37	15.67	13.57