

1 Figures

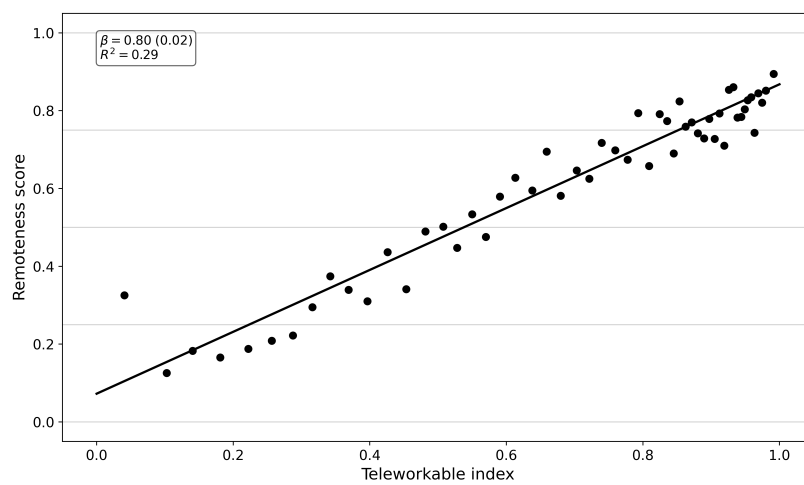


Figure 1: Remote v. Teleworkabe Scores

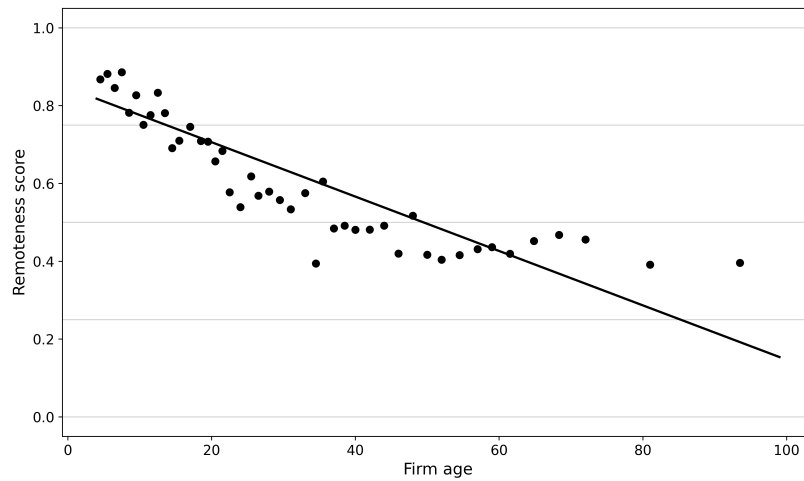


Figure 2: Remote v. Firm Age

2 Table of Means

Table 1: Table of Means

	Startup	Incumbent	All Firms
Panel A: Firm-level			
Growth	0.20 (0.31)	0.06 (0.16)	0.09 (0.22)
Leave	0.26 (0.31)	0.21 (0.28)	0.22 (0.29)
Join	0.36 (0.32)	0.17 (0.18)	0.22 (0.23)
Teleworkable Score (0–1)	0.84 (0.20)	0.67 (0.28)	0.71 (0.27)
Remote Score (0–1)	0.85 (0.30)	0.57 (0.41)	0.64 (0.41)
Employees (Count)	274 (1441)	2749 (9568)	2138 (8402)
Age	7 (2)	43 (34)	34 (33)
Rent (\$/sq ft)	49 (21)	37 (19)	41 (20)
Centrality Score	1353 (1707)	932 (1263)	1036 (1398)
Seniority Levels (Count)	3.65 (0.74)	3.87 (0.49)	3.81 (0.57)
Number of firms	865	2621	3486
Observations	10311	31431	41742
Panel B: User-level			
Total Contributions	362.95 (818.33)	192.71 (522.29)	225.61 (594.97)
Restricted Contributions	319.97 (747.40)	139.93 (359.56)	174.72 (466.14)
Number of firms	708	1501	2209
Number of users	8314	31992	37170
Observations	44664	186491	231155

Notes: Panel A uses firm-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. Panel B relies on worker-half-year observations and its bottom rows list (i) distinct firms, (ii) distinct users, and (iii) total worker-half-year observations. Startup/Incumbent user counts are likewise distinct ID counts aggregated across the whole period and therefore can overlap. *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 (precovid) – OLS

Panel A: Total Contrib. (pct. rk)						
	(1)	(2)	(3)	(4)	(5)	(6)
Remote \times $\mathbb{1}(\text{Post})$	-0.27 (0.44)	-1.03** (0.48)	-1.23** (0.50)	-0.93* (0.49)	-0.66 (0.50)	-0.50 (0.55)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$		5.18*** (1.24)	6.21*** (1.27)	5.41*** (1.29)	4.84*** (1.25)	4.66*** (1.38)
Time FE	✓	✓	✓			
Firm FE	✓	✓		✓	✓	✓
User FE	✓	✓		✓	✓	✓
Firm \times User FE			✓			
Industry \times Time FE				✓		✓
MSA \times Time FE					✓	✓
N	229,710	229,862	224,708	227,829	229,043	222,867

3.2 Instrumental Variables

Table 3: User Productivity (precovid) – IV

Panel A: Total Contrib. (pct. rk)						
	(1)	(2)	(3)	(4)	(5)	(6)
Remote \times $\mathbb{1}(\text{Post})$	-1.90 (2.73)	-7.15* (3.90)	-9.26** (4.01)	-5.11 (5.27)	-6.05 (4.17)	-11.55 (8.14)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$		9.94* (5.37)	12.45** (5.39)	7.67 (5.07)	9.50 (5.85)	9.78 (6.68)
Time FE	✓	✓	✓			
Firm FE	✓	✓		✓	✓	✓
User FE	✓	✓		✓	✓	✓
Firm \times User FE			✓			
Industry \times Time FE				✓		✓
MSA \times Time FE					✓	✓
N	229,710	229,862	224,708	227,829	229,043	222,867
KP rk Wald F	538.04	140.60	123.43	109.16	130.48	49.49

3.3 First Stage

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

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

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

Table 5: 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 $\times \mathbb{1}(\text{Post})$	-1.23** (0.50)	-0.95* (0.51)	-1.22** (0.50)	-1.19** (0.50)	-0.95* (0.51)	-0.90* (0.52)	-1.19** (0.50)	-0.91* (0.52)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	6.21*** (1.27)	4.03*** (1.26)	6.39*** (1.28)	6.15*** (1.28)	4.21*** (1.27)	3.96*** (1.26)	6.40*** (1.30)	4.21*** (1.29)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote $\times \mathbb{1}(\text{Post})$	-9.26** (4.01)	-9.23* (4.87)	-9.72** (3.93)	-9.28** (4.12)	-9.97** (4.86)	-9.24* (5.03)	-9.82** (4.08)	-10.13** (5.14)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	12.45** (5.39)	11.76* (6.15)	14.94*** (5.62)	12.30** (5.52)	14.35** (6.49)	11.68* (6.31)	15.48*** (5.94)	14.97** (6.91)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
KP rk Wald F	123.43	81.62	130.14	117.48	82.68	76.72	121.02	74.32

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

Table 6: 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 \times 1(Post)	-1.23** (0.50)	-1.11* (0.63)	-1.54** (0.63)	2.65 (5.85)	-1.21* (0.71)	4.16 (5.80)	2.14 (5.90)	3.96 (5.86)
Remote \times 1(Post) \times Startup	6.21*** (1.27)	4.08*** (1.27)	6.07*** (1.29)	6.09*** (1.28)	4.06*** (1.28)	3.90*** (1.27)	5.95*** (1.29)	3.88*** (1.28)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote \times 1(Post)	-9.26** (4.01)	-990.04 (3169.06)	-188.00** (95.53)	-21799.94 (13665.66)	-677.88 (982.93)	7540.44 (13396.79)	5749.41 (11264.50)	19936.89 (149586.97)
Remote \times 1(Post) \times Startup	12.45** (5.39)	-182.31 (642.58)	-14.51 (16.54)	-310.11 (255.37)	80.55 (85.79)	177.08 (266.43)	122.50 (200.54)	-67.96 (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

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

Table 7: 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 \times 1(Post)	-1.03** (0.48)	-1.94* (1.13)	-0.57 (0.60)	4.11 (5.86)	-1.48 (1.18)	4.59 (5.86)	5.55 (5.95)	6.04 (5.94)
Remote \times 1(Post) \times Startup	5.25*** (1.24)	2.91** (1.24)	5.64*** (1.29)	5.10*** (1.24)	3.35*** (1.28)	2.71** (1.24)	5.47*** (1.29)	3.12** (1.28)
N	229,710	222,851	229,620	229,710	222,798	222,851	229,620	222,798
Panel B: IV								
Remote \times 1(Post)	-4.57 (3.39)	-2775.24 (11069.18)	-98.17 (198.56)	88633.78 (356887.66)	2183.05 (9557.95)	39.59 (4560.50)	5246.00 (17096.43)	1651.21 (1963.50)
Remote \times 1(Post) \times Startup	9.78* (5.44)	259.56 (1034.96)	-27.25 (77.53)	2571.92 (10384.31)	-254.15 (1451.85)	196.96 (446.61)	239.35 (527.34)	18.19 (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

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

Table 8: 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 \times 1(Post)	-1.23** (0.50)	-1.11* (0.63)	-1.54** (0.63)	2.65 (5.85)	-1.21* (0.71)	4.16 (5.80)	2.14 (5.90)	3.96 (5.86)
Remote \times 1(Post) \times Startup	6.21*** (1.27)	4.08*** (1.27)	6.07*** (1.29)	6.09*** (1.28)	4.06*** (1.28)	3.90*** (1.27)	5.95*** (1.29)	3.88*** (1.28)
N	224,708	218,112	224,596	224,708	218,032	218,112	224,596	218,032
Panel B: IV								
Remote \times 1(Post)	-9.26** (4.01)	-990.04 (3169.06)	-188.00** (95.53)	-21799.94 (13665.66)	-677.88 (982.93)	7540.44 (13396.79)	5749.41 (11264.50)	19936.89 (149586.97)
Remote \times 1(Post) \times Startup	12.45** (5.39)	-182.31 (642.58)	-14.51 (16.54)	-310.11 (255.37)	80.55 (85.79)	177.08 (266.43)	122.50 (200.54)	-67.96 (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

8 Firm Scaling

8.1 OLS

Table 9: Firm Scaling OLS

Panel A: Growth					
	(1)	(2)	(3)	(4)	(5)
Remote $\times \mathbb{1}(\text{Post})$	0.013** (0.005)	0.003 (0.005)	-0.003 (0.006)	-0.000 (0.007)	-0.004 (0.011)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$		0.068*** (0.024)	0.075*** (0.024)	0.078*** (0.027)	0.088** (0.035)
Time FE	✓	✓			
Firm FE	✓	✓	✓	✓	✓
Industry \times Time FE			✓		✓
HQ \times Time FE				✓	✓
N	41,742	41,742	41,406	33,537	23,866

8.2 Instrumental Variables

Table 10: Firm Scaling IV

Panel A: Growth					
	(1)	(2)	(3)	(4)	(5)
Remote $\times \mathbb{1}(\text{Post})$	0.015 (0.011)	-0.002 (0.009)	-0.024 (0.023)	-0.007 (0.015)	0.012 (0.056)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$		0.221** (0.089)	0.210** (0.091)	0.220* (0.129)	0.345 (0.326)
Time FE	✓	✓			
Firm FE	✓	✓	✓	✓	✓
Industry \times Time FE			✓		✓
HQ \times Time FE				✓	✓
N	41,742	41,742	41,406	33,537	23,866
KP rk Wald F	982.73	18.30	20.54	10.19	2.08

8.3 First Stage

Table 11: First-Stage Estimates – Firm Scaling

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

8.4 Remote \rightarrow Teleworkable: First Stage

Table 12: First-Stage Estimate: Remote \rightarrow Teleworkable

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

8.5 Firm Mechanisms – Covid Bifurcation (Continuous)

Table 13: Firm Mechanisms – Lean (Part 1)

Specification	Growth Rate							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote \times $\mathbb{1}(\text{Post})$	0.003 (0.005)	0.005 (0.005)	0.004 (0.005)	0.001 (0.005)	0.005 (0.005)	0.002 (0.005)	0.003 (0.005)	0.004 (0.005)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$	0.068*** (0.024)	0.064** (0.025)	0.076*** (0.023)	0.069*** (0.023)	0.071*** (0.025)	0.063*** (0.025)	0.075*** (0.023)	0.071*** (0.025)
N	41,742	38,580	41,725	41,742	38,563	38,580	41,725	38,563
Panel B: IV								
Remote \times $\mathbb{1}(\text{Post})$	-0.002 (0.009)	0.007 (0.009)	0.003 (0.008)	-0.005 (0.009)	0.010 (0.009)	0.004 (0.009)	0.001 (0.008)	0.008 (0.009)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$	0.221** (0.089)	0.192** (0.094)	0.180** (0.083)	0.177** (0.082)	0.144 (0.089)	0.139 (0.088)	0.173** (0.083)	0.135 (0.089)
N	41,742	38,580	41,725	41,742	38,563	38,580	41,725	38,563
KPrk Wald F	18.30	16.52	18.33	18.09	16.53	16.29	18.15	16.34

8.6 Firm Mechanisms – Covid Bifurcation (Binned)

Table 14: Firm Mechanisms – Lean (Part 1)

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

8.7 Firm Mechanisms – Remote Bifurcation (Continuous)

Table 15: Firm Mechanisms (Part 1)

Specification	Growth Rate							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote $\times \mathbb{1}(\text{Post})$	0.003 (0.005)	0.008 (0.011)	-0.020*** (0.007)	0.033 (0.021)	-0.017 (0.013)	0.031 (0.025)	-0.027 (0.025)	-0.025 (0.029)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.068*** (0.024)	0.067*** (0.026)	0.060** (0.023)	0.064*** (0.023)	0.059** (0.025)	0.065*** (0.025)	0.062*** (0.023)	0.062** (0.025)
N	41,742	38,580	41,725	41,742	38,563	38,580	41,725	38,563
Panel B: IV								
Remote $\times \mathbb{1}(\text{Post})$	-0.002 (0.009)	-0.074** (0.036)	-0.034 (0.023)	-0.043 (0.062)	-0.111*** (0.039)	-0.130* (0.074)	-0.131** (0.064)	-0.241*** (0.080)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.221** (0.089)	0.184** (0.090)	0.154* (0.086)	0.201** (0.083)	0.114 (0.089)	0.170** (0.084)	0.154* (0.085)	0.118 (0.087)
N	41,742	38,580	41,725	41,742	38,563	38,580	41,725	38,563
KP rk Wald F	18.30	14.43	4.59	11.16	10.13	10.76	4.49	8.28

8.8 Firm Mechanisms – Remote Bifurcation (Binned)

Table 16: Firm Mechanisms (Part 1)

Specification	Growth Rate							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rent		✓			✓	✓		✓
HHI			✓		✓		✓	✓
Seniority				✓		✓	✓	✓
Panel A: OLS								
Remote \times $\mathbb{1}(\text{Post})$	0.003 (0.005)	-0.001 (0.006)	-0.016** (0.007)	0.036* (0.021)	-0.021*** (0.008)	0.026 (0.023)	0.013 (0.023)	0.002 (0.025)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$	0.070*** (0.024)	0.066*** (0.025)	0.063*** (0.024)	0.065*** (0.023)	0.059** (0.025)	0.063*** (0.024)	0.065*** (0.023)	0.062** (0.024)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
Panel B: IV								
Remote \times $\mathbb{1}(\text{Post})$	0.006 (0.009)	-0.006 (0.012)	-0.031** (0.014)	-0.003 (0.067)	-0.040** (0.017)	-0.022 (0.074)	-0.053 (0.069)	-0.066 (0.076)
Remote \times $\mathbb{1}(\text{Post}) \times \text{Startup}$	0.209** (0.102)	0.210* (0.112)	0.193* (0.102)	0.157* (0.094)	0.195* (0.113)	0.157 (0.103)	0.166* (0.095)	0.167 (0.104)
N	41,980	38,794	41,946	41,980	38,760	38,794	41,946	38,760
KP rk Wald F	16.53	10.43	10.85	11.09	7.86	7.97	8.24	6.49