1 Figures

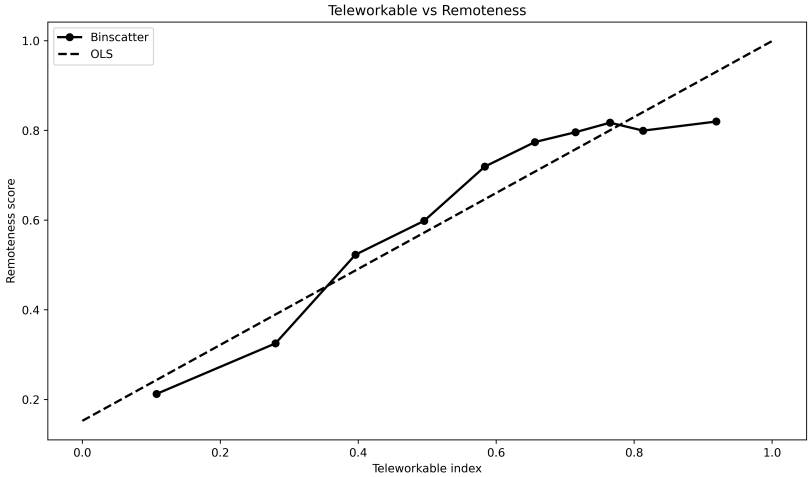

Figure 1: Remote v. Teleworkabe Scores

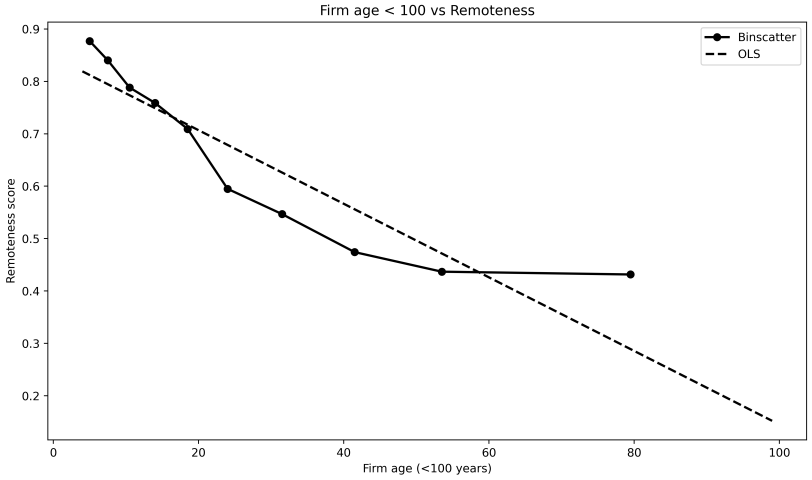

Figure 2: Remote v. Firm Age (< 100 employees)

2 Table of Means

Table 1: Table of Means

	Startup	Non-Startup	All
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
	(0.29)	(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	1401	945	1058
	(1794)	(1295)	(1449)
Seniority Levels (Count)	3.63	3.86	3.81
	(0.76)	(0.49)	(0.58)
N	10450	31530	41980
Panel B: User-level			
Total Contributions (percentile rank 1–100)	61.67	47.32	50.27
	(27.19)	(28.92)	(29.16)
Restricted Contributions (percentile rank 1–100)	64.57	45.96	49.78
	(26.73)	(29.40)	(29.84)
N	10896	42124	53020

Notes: Each cell shows the mean on the first line and the standard deviation (SD) beneath it in parentheses. Decimal precision reflects each variable's scale. *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; N denotes the number of observations in each subgroup.

3 Mechanisms

We begin with the "base" specification:

$$y_{it} = \alpha + \beta_1 \left(remote_i \times covid_t\right) + \beta_2 \left(remote_i \times covid_t \times startup_i\right) + \delta \left(covid_t \times startup_i\right) + \mathrm{FE}_{it} + \varepsilon_{it},$$

which captures how the outcome responds to remote work during COVID and whether that effect differs in young firms.

In the **rent** "mirror" model we add two additional channels:

$$y_{it} = \alpha + \beta_1 \left(remote_i \times covid_t\right) + \beta_2 \left(remote_i \times covid_t \times startup_i\right) + \delta \left(covid_t \times startup_i\right) + \gamma_1 \left(covid_t \times rent_i\right) + \gamma_2 \left(remote_i \times covid_t \times rent_i\right) + \mathrm{FE}_{it} + \varepsilon_{it},$$

so that γ_1 and γ_2 capture how both the baseline COVID effect and the remote-work premium vary with local office rents.

Likewise, the **centrality** (HHI) model adds:

$$y_{it} = \alpha + \beta_1 \left(remote_i \times covid_t\right) + \beta_2 \left(remote_i \times covid_t \times startup_i\right) + \delta \left(covid_t \times startup_i\right) + \gamma_1 \left(covid_t \times hhi_i\right) + \gamma_2 \left(remote_i \times covid_t \times hhi_i\right) + \mathrm{FE}_{it} + \varepsilon_{it}.$$

By turning on each check-mark (rent, centrality, seniority) one at a time—and then in combination—we "mirror" the base COVID×Remote specification through different mechanisms.

3.1 User Productivity Mechanisms

Table 2: User Productivity Mechanisms

	Total Contributions							
Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Baseline	✓	✓	✓	✓	✓	✓	✓	✓
Rent		✓		✓		✓		✓
HHI			✓	✓			✓	✓
Seniority					✓	✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	-2.66***	0.18	-2.52*	1.14	12.69	14.73	16.23	19.07
	(0.99)	(2.33)	(1.30)	(2.45)	(11.42)	(11.41)	(11.83)	(11.83)
Remote × 𝟙(Post) × Startup	9.18***	8.50***	8.33***	8.47***	8.09***	7.93***	7.60***	7.75***
	(2.69)	(2.74)	(2.92)	(2.92)	(2.76)	(2.79)	(2.95)	(2.95)
N	52,995	51,392	51,392	51,392	51,392	51,392	51,392	51,392
Panel B: IV								
Remote × 𝟙(Post)	-17.36**	-662.28	123.22	-312.49	-21312.51	160.32	957.68	-267.63
	(8.72)	(1258.52)	(577.60)	(1438.40)	(66029.30)	(922.16)	(3030.76)	(3882.03)
Remote × 𝟙(Post) × Startup	31.85***	117.04	211.08	238.68	-47.81	70.47	-107.21	227.12
	(12.28)	(170.78)	(709.68)	(398.71)	(427.16)	(66.79)	(379.62)	(1235.02)
N	52,995	47,771	47,771	47,771	47,771	47,771	47,771	47,771
KP rk Wald F	26.05	0.09	0.02	0.04	0.03	0.08	0.05	0.00

3.2 Firm Mechanisms

Table 3: Firm Scaling Mechanisms

	Growth							
Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Baseline	✓	✓	✓	✓	✓	✓	✓	✓
Rent		✓		✓		✓		✓
HHI			✓	✓			✓	✓
Seniority					✓	✓	✓	✓
Panel A: OLS								
Remote × 𝟙(Post)	0.00	0.01	-0.02***	-0.02	0.03	0.03	-0.02	-0.02
	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)
Remote × 𝟙(Post) × Startup	0.07***	0.07***	0.06**	0.06**	0.07***	0.07***	0.06***	0.06**
	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
N	41,980	38,760	38,760	38,760	38,760	38,760	38,760	38,760
Panel B: IV								
Remote × 𝟙(Post)	0.01	-0.13***	-0.05*	-0.17***	-0.01	-0.14*	-0.15**	-0.27***
	(0.01)	(0.05)	(0.03)	(0.05)	(0.07)	(0.08)	(0.07)	(0.08)
Remote × 𝟙(Post) × Startup	0.21**	0.20*	0.08	0.07	0.17	0.16	0.09	0.09
	(0.10)	(0.11)	(0.11)	(0.11)	(0.10)	(0.10)	(0.11)	(0.11)
N	41,980	38,760	38,760	38,760	38,760	38,760	38,760	38,760
KP rk Wald F	16.53	10.68	10.28	8.00	9.25	8.00	7.75	6.33

4 Firm Scaling

4.1 OLS

Table 4: Firm Scaling OLS

Panel A: All Outcomes

	Outcome		
	Growth	Join	Leave
Remote × 𝟙(Post)	0.00	0.01**	0.02***
	(0.00)	(0.00)	(0.00)
Remote × 𝟙(Post) × Startup	0.07***	0.05*	-0.01
	(0.02)	(0.03)	(0.01)
N	41,980	41,980	41,980

Panel B: FE Variants

	Growth			
	(1)	(2)	(3)	(4)
Remote × 𝟙(Post)	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Remote × 𝟙(Post) × Startup	0.07***	0.07***	0.07***	0.07***
	(0.02)	(0.02)	(0.02)	(0.02)
Time FE			✓	✓
Firm FE		✓		✓
N	41,980	41,980	41,980	41,980

4.2 Instrumental Variables

Table 5: Firm Scaling IV

Panel A: All Outcomes

	Outcome		
	Growth	Join	Leave
Remote × 𝟙(Post)	0.01	0.04***	0.05***
	(0.01)	(0.01)	(0.01)
Remote × 𝟙(Post) × Startup	0.21**	0.23**	0.09
	(0.10)	(0.11)	(0.06)
N	41,980	41,980	41,980
KP rk Wald F	16.53	16.53	16.53

Panel B: FE Variants

	Growth			
	(1)	(2)	(3)	(4)
Remote × 𝟙(Post)	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Remote × 𝟙(Post) × Startup	0.20	0.21**	0.20**	0.21**
	(0.10)	(0.10)	(0.10)	(0.10)
Time FE			✓	✓
Firm FE		✓		✓
N	41,980	41,980	41,980	41,980
KP rk Wald F	8.26	16.53	8.26	16.53

4.3 First Stage

Table 6: First-Stage Estimates – Firm Scaling

	Dependent variable	
Instrument	Remote × 𝟙(Post)	Remote × 𝟙(Post) × Startup
Teleworkable × 𝟙(Post)	0.826***	-0.000
	(0.028)	(0.000)
Teleworkable × 𝟙(Post) × Startup	-0.412***	0.414***
	(0.077)	(0.072)
𝟙(Post) × Startup	0.455***	0.575***
	(0.055)	(0.052)
Time FE	✓	✓
Firm FE	✓	✓
Partial F	437.86	16.54
N	41,980	41,980

5 User Productivity

5.1 OLS

Table 7: User Productivity – OLS

Panel A: All Outcomes

	Outcome	
	Total	Restricted
Remote × 𝟙(Post)	-2.66***	-1.96**
	(0.99)	(0.99)
Remote × 𝟙(Post) × Startup	9.18***	8.30***
	(2.69)	(2.62)
N	52,995	52,995

Panel B: FE Variants

	Total Contributions					
	(1)	(2)	(3)	(4)	(5)	(6)
Remote × 𝟙(Post)	-1.29		-1.29			
	(1.05)	-2.38**	(1.05)	-2.38**	-2.66***	-2.79***
		(1.01)		(1.01)	(0.99)	(0.99)
Remote × 𝟙(Post) × Startup	2.74	6.19**	2.75	6.20**		
	(2.92)	(2.82)	(2.92)	(2.82)	9.18***	9.77***
					(2.69)	(2.68)
Time FE			✓	✓	✓	✓
Firm FE		✓		✓	✓	
User FE					✓	
Firm × User FE						✓
N	53,020	52,995	53,020	52,995	52,995	52,718

5.2 Instrumental Variables

Table 8: User Productivity – IV

Panel A: All Outcomes

	Outcome	
	Total	Restricted
Remote × 𝟙(Post)	-17.36**	-19.25**
	(8.72)	(8.88)
Remote × 𝟙(Post) × Startup	31.85***	34.94***
	(12.28)	(12.13)
N	52,995	52,995
KP rk Wald F	26.05	26.05

Panel B: FE Variants

	Total Contributions					
	(1)	(2)	(3)	(4)	(5)	(6)
Remote × 𝟙(Post)	-306.40	-18.75**	-306.96	-18.76**	-17.36**	-19.30**
	(246.93)	(9.01)	(247.32)	(9.01)	(8.72)	(8.79)
Remote × 𝟙(Post) × Startup		38.28***		38.30***	31.85***	33.67***
	2265.39	(13.01)	2264.90	(13.02)	(12.28)	(12.32)
	(4881.21)		(4882.69)			
Time FE			✓	✓	✓	✓
Firm FE		✓		✓	✓	
User FE					✓	
Firm × User FE						✓
N	49,287	52,995	49,287	52,995	52,995	52,718
KP rk Wald F	0.04	27.41	0.04	27.41	26.05	25.60

5.3 First Stage

Table 9: First-Stage Estimates – User Productivity

	Dependent variable	
Instrument	Remote × 𝟙(Post)	Remote × 𝟙(Post) × Startup
Teleworkable × 𝟙(Post)	0.25***	0.00***
	(0.03)	(0.00)
Teleworkable × 𝟙(Post) × Startup	0.09	0.34***
	(0.05)	(0.04)
𝟙(Post) × Startup	0.14***	0.65***
	(0.04)	(0.03)
Time FE	✓	✓
Firm FE	✓	✓
User FE	✓	✓
Partial F	60.08	36.85
N	52,995	52,995