

# 1 Table of Means

Table 1: Summary Statistics

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

## 2 User Productivity

	Contribution Rank			Total
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.28 (0.44)	-1.03** (0.48)	-1.23** (0.50)	-19.74*** (4.66)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	—	5.18*** (1.24)	6.21*** (1.27)	59.23*** (14.22)
Pre-Covid Mean	49.92	49.92	49.92	184.71
N	229,862	229,862	224,708	224,708
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓	✓		
Individual	✓	✓		
Firm $\times$ Individual			✓	✓
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-3.61 (2.82)	-7.15* (3.90)	-9.26** (4.01)	-124.39*** (33.82)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	—	9.94* (5.37)	12.45** (5.39)	130.92** (55.14)
Pre-Covid Mean	49.92	49.92	49.92	184.71
KP rk Wald F	543.26	140.60	123.43	123.43
N	229,862	229,862	224,708	224,708
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓	✓		
Individual	✓	✓		
Firm $\times$ Individual			✓	✓

### 3 Firm Scaling

Table 2: Firm Scaling

	Growth		Join	Leave
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	0.01** (0.01)	0.00 (0.00)	0.01** (0.00)	0.02*** (0.00)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	—	0.07*** (0.02)	0.05* (0.03)	-0.01 (0.01)
Pre-Covid Mean	0.11	0.11	0.24	0.14
N	41,980	41,980	41,980	41,980
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	0.02* (0.01)	0.01 (0.01)	0.04*** (0.01)	0.05*** (0.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	—	0.21** (0.10)	0.23** (0.11)	0.09 (0.06)
KP rk Wald F	839.65	16.53	16.53	16.53
N	41,980	41,980	41,980	41,980
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓	✓	✓	✓

Table 3: Firm Scaling (Continued)

	Postings	Posting Rank	Log Postings	Hires/ Posting	Any Postings
	(1)	(2)	(3)	(4)	(5)
<b>Panel A: OLS</b>					
Remote $\times \mathbb{1}(\text{Post})$	-0.91*** (0.23)	7.19*** (0.64)	-0.40*** (0.06)	0.09 (0.08)	0.06*** (0.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.63** (0.27)	-0.13 (1.99)	0.15 (0.18)	0.37* (0.22)	-0.02 (0.04)
Pre-Covid Mean	0.50	46.10	4.20	2.15	0.76
N	37,681	37,681	30,313	27,790	37,681
<b>Panel B: IV</b>					
Remote $\times \mathbb{1}(\text{Post})$	-3.58*** (0.61)	15.81*** (1.28)	-0.92*** (0.11)	0.38** (0.17)	0.06** (0.02)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	1.60* (0.96)	15.92* (9.11)	-1.16 (0.76)	2.16** (1.09)	0.23 (0.18)
KP rk Wald F	10.66	10.66	10.03	9.04	10.66
N	37,681	37,681	30,313	27,790	37,681
<b>Fixed Effects</b>					
Time	✓	✓	✓	✓	✓
Firm	✓	✓	✓	✓	✓

## 4 User Mechanisms

Table 4: User Mechanisms

	Contribution Rank					
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A: OLS</b>						
Remote $\times \mathbb{1}(\text{Post})$	-1.23** (0.50)	-0.95* (0.51)	-1.22** (0.50)	-1.19** (0.50)	-0.91* (0.52)	-1.21** (0.50)
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*** (1.29)	6.24*** (1.29)
N	224,708	218,112	224,596	224,708	218,032	224,708
<b>Panel B: IV</b>						
Remote $\times \mathbb{1}(\text{Post})$	-9.26** (4.01)	-9.23* (4.87)	-9.72** (3.93)	-9.28** (4.12)	-10.13** (5.14)	-3.68 (3.88)
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)	14.97** (6.91)	6.88 (5.65)
N	224,708	218,112	224,596	224,708	218,032	224,708
KP rk Wald F	123.43	81.62	130.14	117.48	74.32	134.89
<b>Fixed Effects</b>						
Time	✓	✓	✓	✓	✓	✓
Firm $\times$ Individual	✓	✓	✓	✓	✓	✓
<b>Controls</b>						
Rent		✓			✓	
HHI			✓		✓	
Seniority				✓	✓	
Post-COVID Growth						✓

## 5 User Wages

	Log salary				
	(1)	(2)	(3)	(4)	(5)
<b>Panel A: OLS</b>					
Remote $\times$ $\mathbb{1}(\text{Post})$	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	-0.00 (0.01)	-0.02** (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Pre-Covid Mean	11.49	11.49	11.49	11.49	11.49
N	229,862	224,708	222,531	222,531	222,528
<b>Panel B: IV</b>					
Remote $\times$ $\mathbb{1}(\text{Post})$	-0.01 (0.02)	0.03 (0.02)	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	-0.04 (0.03)	-0.05* (0.03)	-0.08*** (0.02)	-0.08*** (0.02)	-0.08*** (0.02)
KP rk Wald F	140.60	123.43	127.26	126.96	126.03
N	229,862	224,708	222,531	222,531	222,528
<b>Fixed Effects</b>					
Time	✓	✓	✓	✓	✓
Firm	✓				
Individual	✓				
Firm $\times$ Individual		✓	✓	✓	✓
Title			✓	✓	✓
Location (Job)				✓	
Location (MSA)					✓

## 6 Remote Modalities

	Contribution Rank			
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Fully Remote $\times$ $\mathbb{1}(\text{Post})$	-0.97*** (0.32)	-0.76** (0.31)	-0.86*** (0.31)	-0.67** (0.30)
Fully Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	2.97*** (0.72)	2.44*** (0.71)	3.39*** (0.71)	2.81*** (0.69)
Pre-Covid Mean	50.04	50.04	49.92	49.92
N	210,721	215,332	224,708	229,862
<b>Panel B: IV</b>				
Fully Remote $\times$ $\mathbb{1}(\text{Post})$	-3.72** (1.74)	-2.71* (1.64)	-4.11** (1.77)	-3.09* (1.68)
Fully Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	4.37* (2.50)	3.39 (2.45)	5.61** (2.45)	4.38* (2.41)
KP rk Wald F	292.85	351.60	311.51	371.38
N	210,721	215,332	224,708	229,862
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm		✓		✓
Individual		✓		✓
Firm $\times$ Individual	✓		✓	
<b>Comparison Group</b>				
Hybrid	✓	✓		
Hybrid/In-Person			✓	✓

## 7 User Productivity Heterogeneity

	<u>Female</u>		<u>Age 20–45</u>	
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-1.03** (0.48)	-1.23** (0.50)	-1.03** (0.48)	-1.23** (0.50)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Trait}$	-2.54*** (0.62)	-2.18*** (0.66)	-1.79*** (0.58)	-2.09*** (0.64)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	5.18*** (1.24)	6.21*** (1.27)	5.18*** (1.24)	6.21*** (1.27)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Trait} \times \text{Startup}$	3.49 (3.41)	6.42* (3.85)	-4.39 (3.66)	1.03 (4.42)
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-7.15* (3.90)	-9.26** (4.01)	-7.15* (3.90)	-9.26** (4.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Trait}$	-2.75*** (0.72)	-2.37*** (0.77)	-1.37* (0.74)	-1.58* (0.82)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	9.94* (5.37)	12.45** (5.39)	9.94* (5.37)	12.45** (5.39)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Trait} \times \text{Startup}$	5.67 (10.98)	21.98* (11.66)	14.04 (17.39)	26.94 (18.51)
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓		✓	
Individual	✓		✓	
Firm $\times$ Individual		✓		✓



## 8 User Productivity Robustness

	Contribution Rank			
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.79 (0.81)	-0.65 (0.83)	-0.66 (0.69)	-0.58 (0.70)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	6.67*** (1.83)	7.19*** (1.85)	5.76*** (1.84)	6.47*** (1.89)
Pre-Covid Mean	47.76	47.76	48.47	48.47
N	80,226	79,210	125,642	123,122
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-1.25 (4.46)	-0.29 (4.43)	-3.84 (5.14)	-2.58 (5.17)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	-1.50 (6.93)	-2.80 (6.91)	7.66 (7.41)	7.78 (7.45)
KP rk Wald F	92.51	91.69	75.88	70.48
N	80,226	79,210	125,642	123,122
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓		✓	
Individual	✓		✓	
Firm $\times$ Individual		✓		✓
<b>Sample Filters</b>				
Drop Tech Industry	✓	✓		
Drop SOC Core			✓	✓
Only CA/NY				
Exclude CA/NY				

	Contribution Rank			
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times$ $\mathbb{1}(\text{Post})$	-1.66* (0.95)	-1.89** (0.96)	-0.45 (0.68)	-0.85 (0.69)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	6.54*** (2.13)	7.23*** (2.15)	5.45*** (2.02)	6.47*** (2.08)
Pre-Covid Mean	51.18	51.18	49.01	49.01
N	71,161	69,931	111,374	109,314
<b>Panel B: IV</b>				
Remote $\times$ $\mathbb{1}(\text{Post})$	1.45 (8.04)	-3.86 (8.27)	-10.94** (5.18)	-12.70** (5.18)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	-2.72 (9.89)	2.55 (10.03)	23.61** (10.77)	30.95*** (10.98)
KP rk Wald F	35.29	31.87	75.59	72.09
N	71,161	69,931	111,374	109,314
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓		✓	
Individual	✓		✓	
Firm $\times$ Individual		✓		✓
<b>Sample Filters</b>				
Drop Tech Industry				
Drop SOC Core				
Only CA/NY	✓	✓		
Exclude CA/NY			✓	✓

## 9 Figures

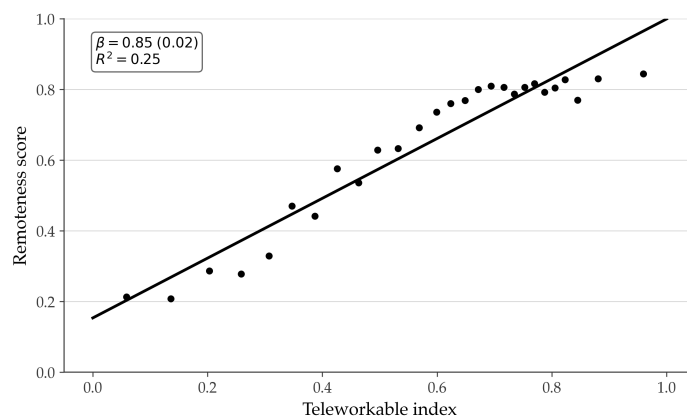


Figure 1: Remote vs. Teleworkable Scores

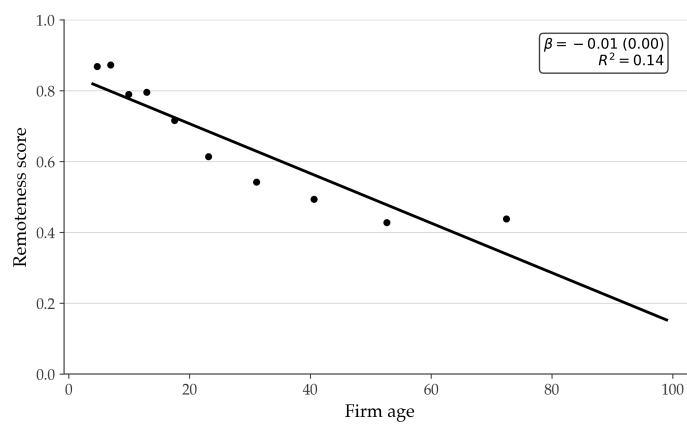


Figure 2: Remote vs. Firm Age

## 10 Event Studies

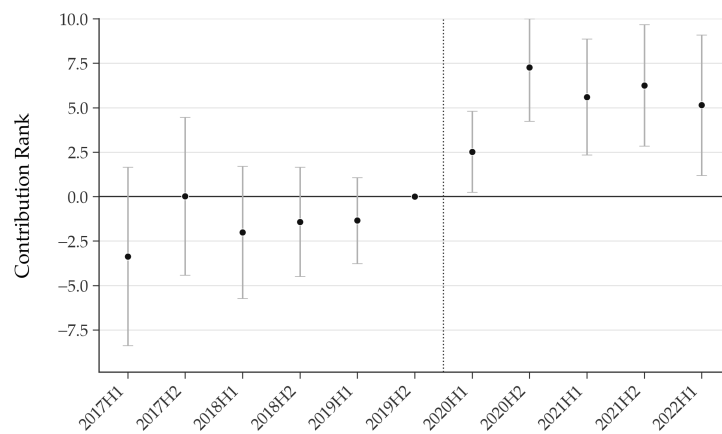


Figure 3: Event Study: User Rank for Contributions (OLS)

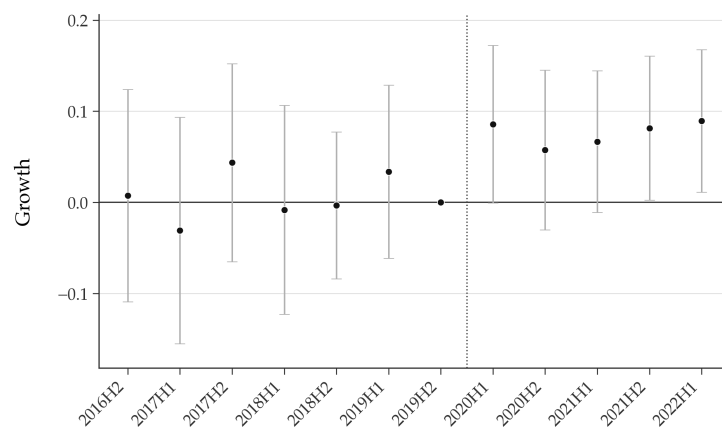


Figure 4: Event Study: Firm Growth (OLS)

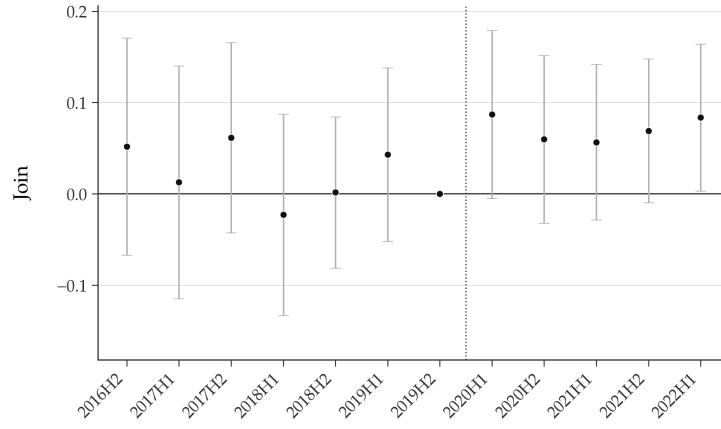


Figure 5: Event Study: Join (OLS)

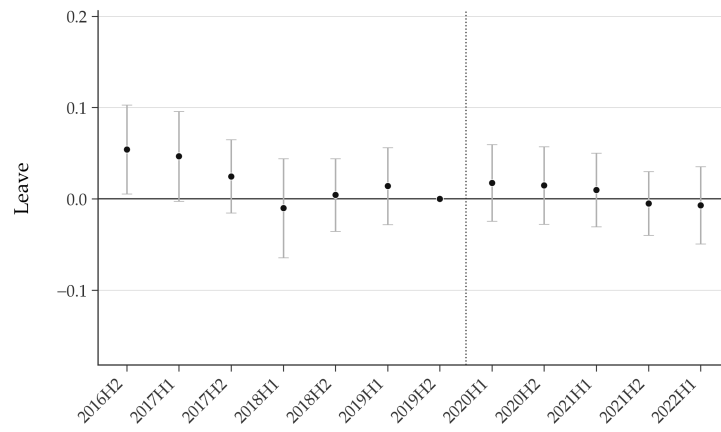


Figure 6: Event Study: Leave (OLS)

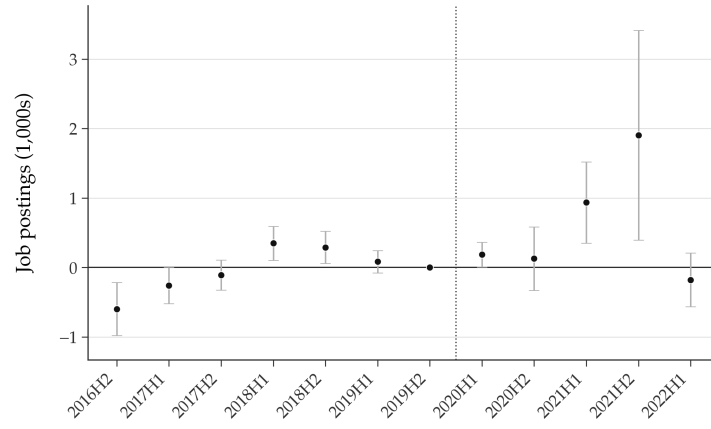


Figure 7: Event Study: Job Postings (OLS)

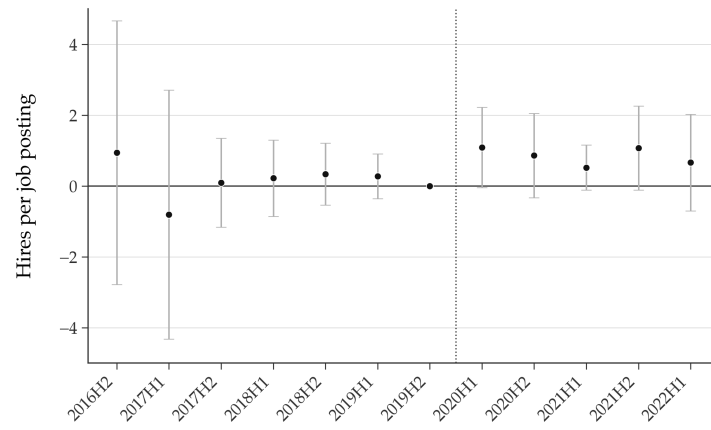
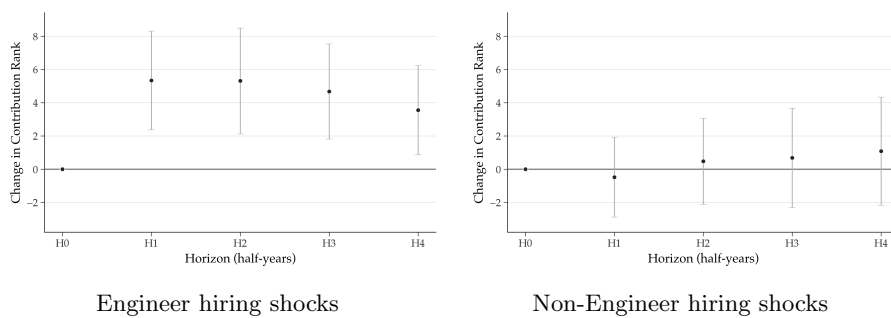


Figure 8: Event Study: Hires per Job Posting (OLS)

## 11 Impulse Response Functions

Panel A: Hybrid/In-person



Panel B: Fully Remote

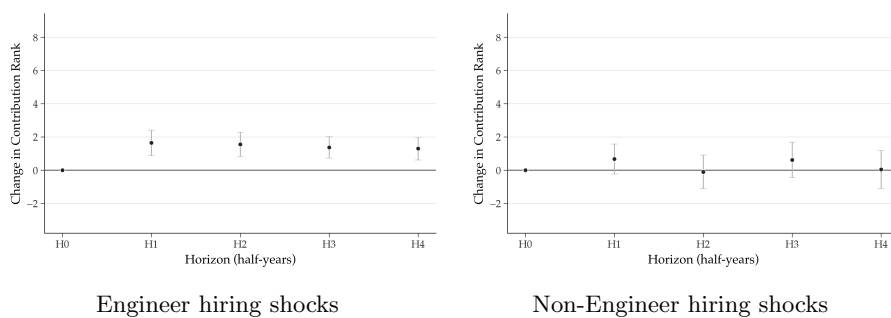


Figure 9: Change in contribution rank following role-specific hiring growth; each panel shares a common scale.





# Appendix

## A First Stage Summary

Table 5: First Stage Summary

	Remote $\times$ $\mathbb{1}(\text{Post})$		Remote $\times$ $\mathbb{1}(\text{Post})$ $\times$ Startup	
<b>Panel A: Individual-level</b>				
Teleworkable $\times$ $\mathbb{1}(\text{Post})$	0.23*** (0.01)	0.24*** (0.02)	-0.00* (0.00)	-0.00*** (0.00)
Teleworkable $\times$ $\mathbb{1}(\text{Post}) \times$ Startup	0.16*** (0.02)	0.16*** (0.03)	0.39*** (0.02)	0.40*** (0.02)
$\mathbb{1}(\text{Post}) \times$ Startup	0.09*** (0.02)	0.09*** (0.02)	0.60*** (0.01)	0.59*** (0.01)
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓		✓	
Individual	✓		✓	
Firm $\times$ Individual		✓		✓
Partial F	325.46	295.11	186.55	175.46
KP rk Wald F	140.60	123.43	140.60	123.43
N	229,862	224,708	229,862	224,708
<b>Panel B: Firm-level</b>				
Teleworkable $\times$ $\mathbb{1}(\text{Post})$	0.83*** (0.03)	—	-0.00 (0.00)	—
Teleworkable $\times$ $\mathbb{1}(\text{Post}) \times$ Startup	-0.41*** (0.08)	—	0.41*** (0.07)	—
$\mathbb{1}(\text{Post}) \times$ Startup	0.46*** (0.06)	—	0.58*** (0.05)	—
<b>Fixed Effects</b>				
Time	✓		✓	
Firm	✓		✓	
Partial F	437.86	—	16.54	—
KP rk Wald F	16.53	—	16.53	—
N	41,980	—	41,980	—

## B Restricted Contributions

	Contribution Rank			Total
	(1)	(2)	(3)	(4)
<b>Panel A: OLS</b>				
Remote $\times$ $\mathbb{1}(\text{Post})$	-0.51 (0.46)	-1.44*** (0.50)	-1.48*** (0.52)	-17.33*** (3.91)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	—	6.37*** (1.24)	7.31*** (1.27)	55.41*** (12.74)
Pre-Covid Mean	48.48	48.48	48.48	138.15
N	229,862	229,862	224,708	224,708
<b>Panel B: IV</b>				
Remote $\times$ $\mathbb{1}(\text{Post})$	-3.36 (2.91)	-6.60 (4.08)	-6.75 (4.19)	-105.59*** (28.11)
Remote $\times$ $\mathbb{1}(\text{Post}) \times \text{Startup}$	—	9.07* (5.43)	10.52* (5.42)	108.20** (48.92)
KP rk Wald F	543.26	140.60	123.43	123.43
N	229,862	229,862	224,708	224,708
<b>Fixed Effects</b>				
Time	✓	✓	✓	✓
Firm	✓	✓		
Individual	✓	✓		
Firm $\times$ Individual			✓	✓

## C Startup Age Cutoff Robustness

### C.1 Total Contribution Rank

Total Contribution Rank	Startup Age Cutoff			
	$\leq 5$	$\leq 7$	$\leq 10$	$\leq 12$
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.84* (0.43)	-0.83* (0.45)	-1.03** (0.48)	-1.11** (0.51)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	13.83*** (4.55)	6.12*** (1.82)	5.18*** (1.24)	4.55*** (1.07)
Pre-Covid Mean	49.92	49.92	49.92	49.92
N	229,862	229,862	229,862	229,862
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-3.33 (2.91)	-4.85 (3.31)	-7.15* (3.90)	-9.84 (6.35)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	-13.03 (18.72)	11.77* (6.32)	9.94* (5.37)	9.84 (6.84)
Pre-Covid Mean	49.92	49.92	49.92	49.92
KP rk Wald F	249.96	201.72	140.60	52.03
N	229,862	229,862	229,862	229,862

## C.2 Restricted Contribution Rank

Restricted Contribution Rank	Startup Age Cutoff			
	$\leq 5$	$\leq 7$	$\leq 10$	$\leq 12$
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-1.21*** (0.45)	-1.13** (0.47)	-1.44*** (0.50)	-1.37** (0.54)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	15.61*** (4.71)	6.06*** (1.81)	6.37*** (1.24)	4.52*** (1.10)
Pre-Covid Mean	48.48	48.48	48.48	48.48
N	229,862	229,862	229,862	229,862
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-3.07 (3.01)	-4.22 (3.43)	-6.60 (4.08)	-3.94 (6.60)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	-12.08 (18.82)	9.90 (6.16)	9.07* (5.43)	0.82 (7.06)
Pre-Covid Mean	48.48	48.48	48.48	48.48
KP rk Wald F	249.96	201.72	140.60	52.03
N	229,862	229,862	229,862	229,862

### C.3 Firm Growth Rate

Firm Growth Rate	Startup Age Cutoff			
	$\leq 5$	$\leq 7$	$\leq 10$	$\leq 12$
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.01 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.22*** (0.07)	0.12*** (0.04)	0.07*** (0.02)	0.06*** (0.02)
Pre-Covid Mean	0.11	0.11	0.11	0.11
N	41,980	41,980	41,980	41,980
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.00 (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.03 (0.21)	0.19 (0.15)	0.21** (0.10)	0.16** (0.07)
Pre-Covid Mean	0.11	0.11	0.11	0.11
KP rk Wald F	5.04	6.46	16.53	25.89
N	41,980	41,980	41,980	41,980

## C.4 Firm Join Rate

Firm Join Rate	Startup Age Cutoff			
	$\leq 5$	$\leq 7$	$\leq 10$	$\leq 12$
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	-0.00 (0.00)	0.00 (0.00)	0.01** (0.00)	0.01** (0.00)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.21*** (0.08)	0.10*** (0.04)	0.05* (0.03)	0.04** (0.02)
Pre-Covid Mean	0.24	0.24	0.24	0.24
N	41,980	41,980	41,980	41,980
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	0.03*** (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.21 (0.21)	0.26 (0.17)	0.23** (0.11)	0.16** (0.08)
Pre-Covid Mean	0.24	0.24	0.24	0.24
KP rk Wald F	5.04	6.46	16.53	25.89
N	41,980	41,980	41,980	41,980

## C.5 Firm Leave Rate

Firm Leave Rate	Startup Age Cutoff			
	$\leq 5$	$\leq 7$	$\leq 10$	$\leq 12$
<b>Panel A: OLS</b>				
Remote $\times \mathbb{1}(\text{Post})$	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)	0.02*** (0.00)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.01 (0.03)	-0.00 (0.02)	-0.01 (0.01)	-0.01 (0.01)
Pre-Covid Mean	0.14	0.14	0.14	0.14
N	41,980	41,980	41,980	41,980
<b>Panel B: IV</b>				
Remote $\times \mathbb{1}(\text{Post})$	0.05*** (0.01)	0.05*** (0.01)	0.05*** (0.01)	0.05*** (0.01)
Remote $\times \mathbb{1}(\text{Post}) \times \text{Startup}$	0.31* (0.17)	0.17 (0.11)	0.09 (0.06)	0.06 (0.04)
Pre-Covid Mean	0.14	0.14	0.14	0.14
KP rk Wald F	5.04	6.46	16.53	25.89
N	41,980	41,980	41,980	41,980