Why Working From Home Will Stick

Jose Maria Barrero[a] Nicholas Bloom[b] Steven J. Davis[c]

[a]ITAM Business [b]Stanford [c]Chicago Booth & Hoover Institution

November 2021

Research Questions

How much working from home (WFH) will there be after the end of the COVID-19 pandemic?

What economic mechanisms support a persistent shift to WFH?

What consequences will the persistent shift to WFH bring?

- For workers
- For productivity
- For managers and their firms

THIS PAPER

1. **Survey 68,000+ working-age Americans earning >$10k in 2019 about monthly since May 2020**

2. **Full paid days WFH: 5% before, 45% during, 26% after COVID-19**

3. **Reasons why WFH will (partly) stick:**
   - Mass experimentation & learning ⇒ re-optimization
   - Investments by workers & firms
   - Attitudes: diminished stigma, worker preferences, fear of proximity to others

4. **Consequences of persistent WFH post-COVID:** benefits *higher earners* most, **5.0%** *higher productivity*, managerial challenges

Related Literature

Outline

Survey and Methodology

WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- Managers

Outline

Survey and Methodology

WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- Managers

Survey of Working Arrangements and Attitudes (SWAA)

18 waves (repeated cross sections) using commercial survey providers

- 68,000+ responses collected between May 2020 and October 2021 (ongoing)

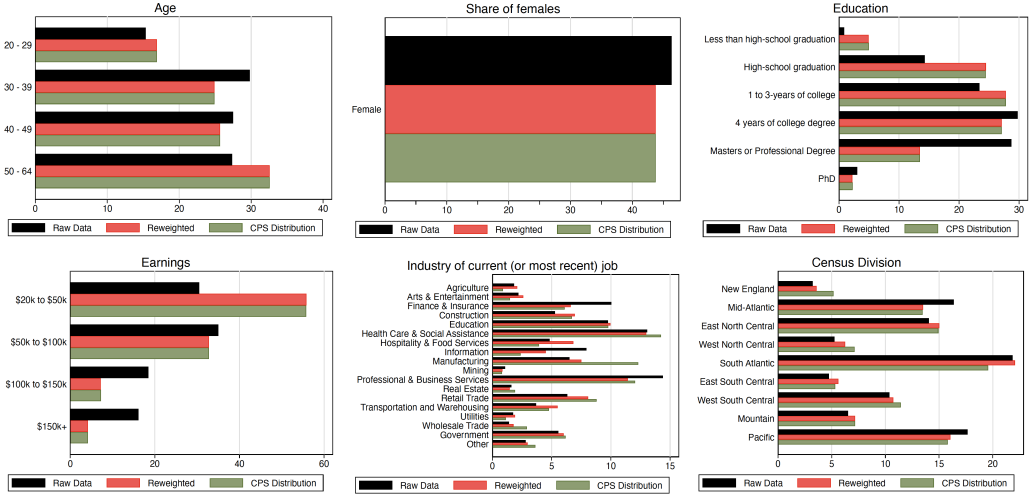
Target population: persons aged 20 to 64, earning >$10K in 2019

- Re-weight to 2010-2019 CPS pop. by {age $\times$ sex $\times$ education $\times$ earnings}

60+ questions per wave:

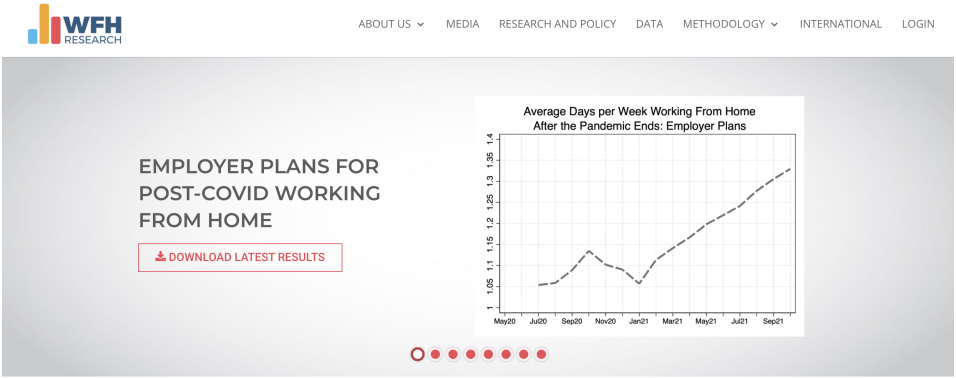
- Demographics, earnings, hours worked, commuting time, spending
- Extent of WFH <u>during</u> COVID
- **Worker desires** & **employer plans** for WFH <u>after</u> COVID
- Experiences, perspectives on WFH

Survey Responses vs. CPS



Notes: Notes: Each figure shows the distribution of raw survey responses, survey responses reweighted to match the share of persons aged 20 to 64 in a given age x sex x education x earnings cell in the 2010 – 2019 CPS (focusing on those who earned more than $20,000 a year), and the corresponding distribution in the CPS. Data are from 33,250 survey responses collected between May 2020 and March 2021.

Code and (Anonymized) Data Available at www.wfhresearch.com



To sign up for monthly results updates please click here.
Follow us on Twitter @WFHResearch

Outline

Survey and Methodology

WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- Managers

During COVID, 10-12× pre-COVID WFH

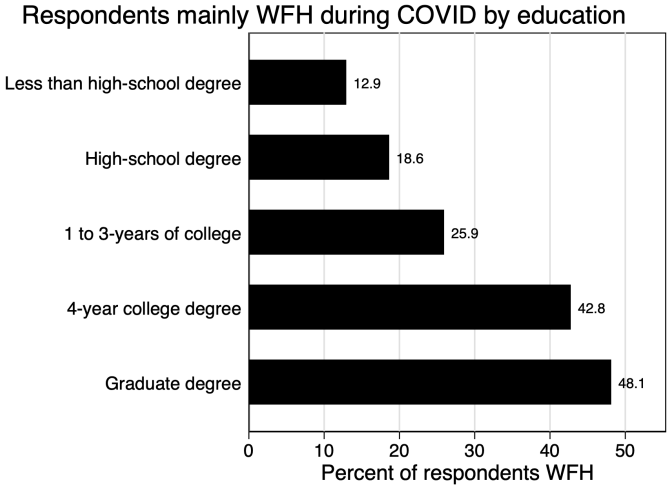
Before COVID WFH amounted to 4.8% of full paid working days

- 2017-2018 American Time Use Survey (ATUS)
- 14.7% of workers had full paid days at home
- Among those who did, only ≈ 45% regularly WFH >1 day per week
- Davis, Ghent, and Gregory (2021) reach a similar estimate with ATUS microdata

During COVID, pooling May 2020–October 2021 waves: Time series

- WFH amounts on average to **45 (0.3)%** of full paid working days
- In May 2020, **61.5 (1.0)%** of full paid working days

Incidence of WFH during COVID is uneven



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Question: Plans for post-COVID WFH

After COVID, in 2022 and later, how often ***is your employer planning*** for you to work full days at home?

- ○ Never
- ○ About once or twice per month
- ○ 1 day per week
- ○ 2 days per week
- ○ 3 days per week
- ○ 4 days per week
- ○ 5+ days per week
- ○ My employer has not discussed this matter with me or announced a policy about it
- ○ I have no employer

Projecting Post-COVID WFH

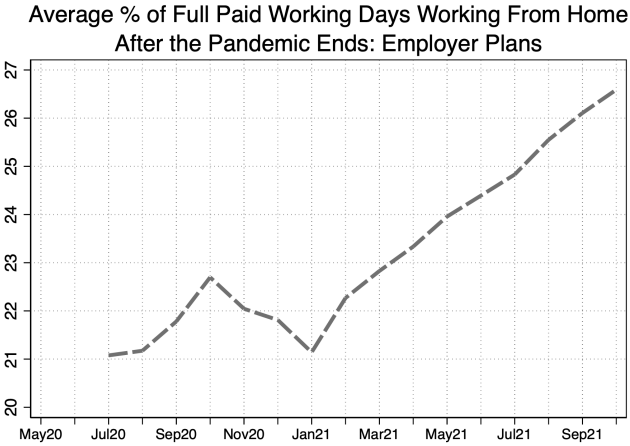
Assign 0 days (0%) to respondents who choose:

- *Never*
- *About once or twice per month*
- *My employer has not discussed this matter with me or announced a policy about it*

For other choices assign:

- 20% if *1 day per week*
- 40% if *2 days per week*
- ...

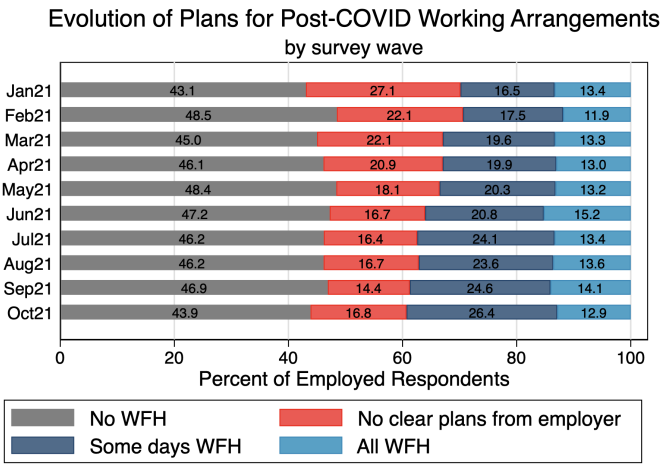
Post-COVID, > 5× pre-COVID WFH, Rising



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. In each month we project employer plans for post-COVID working from home based on the average responses to the question: "After COVID, in 2022 and later, how often is your employer planning for you to work full days at home?" Then we compute a three-month moving average of the monthly averages, except at the endpoints where we use a two-month moving average.

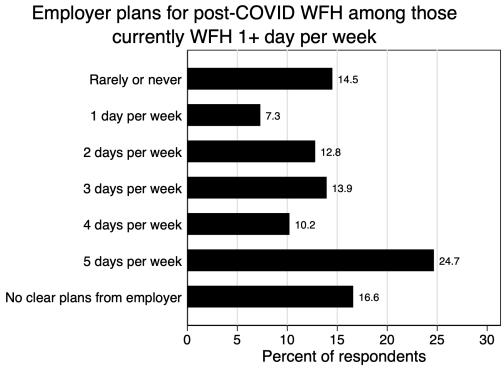
▸ Raw time series

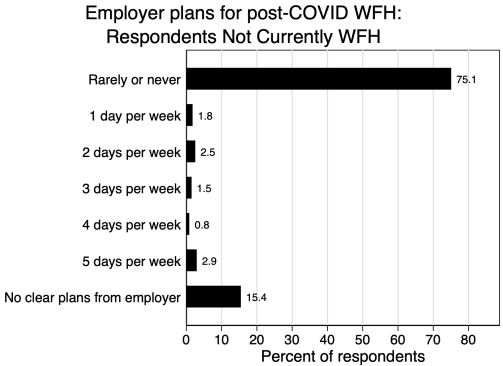
"Hybrid" (Some WFH) Increasingly Popular



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. In each month starting on January 2021 we breakdown responses to the following question by broad working arrangements: "After COVID, in 2022 and later, how often is your employer planning for you to work full days at home?" Our overall projection for post-COVID working from home assigns zeros to respondents who report their employer has not given them clear plans.

Post-COVID WFH Plans by Fall 2021 Status: 80% More Hybrid Than Full-Remote





Notes: Data are from 15,000 survey responses collected between August and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. We show the response distribution for the following separately for those working from home in Fall 2021 and those who are not: "After COVID, in 2022 and later, how often is your employer planning for you to work full days at home?" Our overall projection for post-COVID working from home assigns zeros to respondents who report their employer has not given them clear plans.

Outline

Survey and Methodology

WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- Managers

Sketch of a Theoretical Framework

Two technologies giving payoff x_{it} to firm i at time t

Traditional: $x \sim F_i^T(x, p_t)$ $\quad p_t \in \{\text{pandemic}, \text{normal}\}$

- $F_i^T(x, \text{normal})$ FOSD $F_i^T(x, \text{pandemic})$ $\forall x$

Remote: $x \sim F_i^R(x, \gamma_t, \theta_{it})$

- $\gamma_t \equiv$ activity share of firms operating remote technology
- $\theta_{it} \equiv$ information and beliefs at t about $F_i^R(\cdot)$
- If $\gamma' > \gamma$, then $F_i^R(x, \gamma', \theta)$ FOSD $F_i^R(x, \gamma, \theta)$, a.k.a. strategic complementarity
- Sunk cost/investment to <u>try it out</u> $C_i \geq 0$

Consequences of a Pandemic

For some, profitable to switch to *Remote* and pay one-time cost C_i

Some firms switching $\Rightarrow$ profitable for <u>more firms</u> to switch

Firms get the chance to update their information/beliefs θ_{it} about $F_i^R(\cdot)$

Consequences of a Pandemic

For some, profitable to switch to *Remote* and pay one-time cost C_i

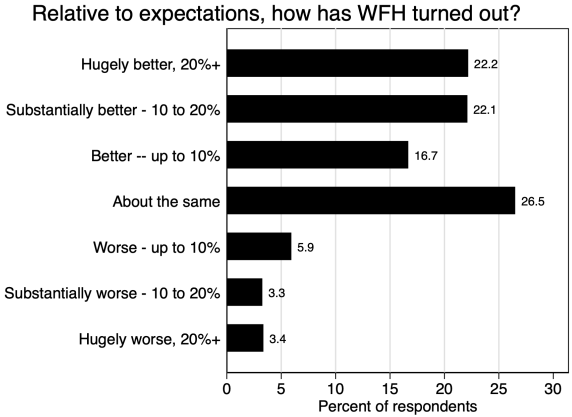
Some firms switching $\Rightarrow$ profitable for <u>more firms</u> to switch

Firms get the chance to update their information/beliefs θ_{it} about $F_i^R(\cdot)$

Stickiness in the remote technology because:

- Already paid switching cost C_i
- γ rises relative to before the pandemic $\Rightarrow$ remote more profitable than before
- If priors θ were too pessimistic, forced, coordinated experimentation eliminates bias against remote
- Learning about Remote could be easier if γ is high

1. Forced experimentation and learning overcome inertia

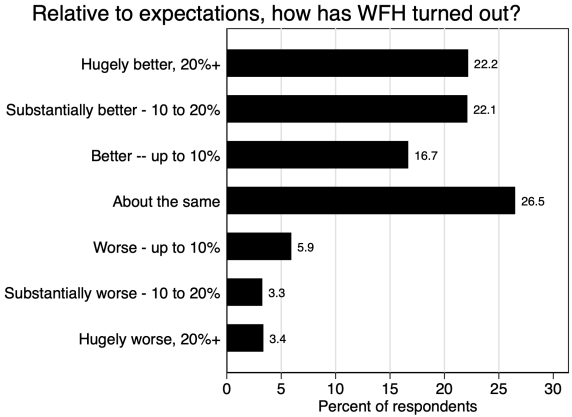


Compared to your expectations ***before COVID (in 2019),*** *how has working from home turned out for you [in terms of productivity/efficiency]?*

Time series

Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

1. Forced experimentation and learning overcome inertia



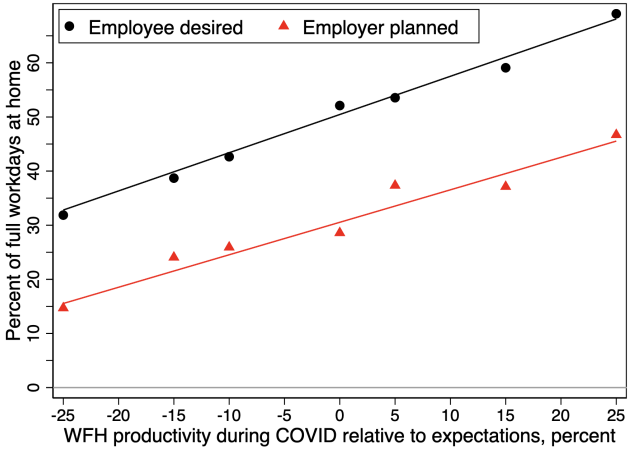
Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Two effects:

- High realized payoffs under WFH for some
- Experimentation reveals pessimistic priors about WFH

Time series

Desired and Planned Post-COVID WFH Increase with WFH Productivity Surprises



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

2. Investments enabling WFH

Investment into WFH adds up to 0.7% of GDP

How many hours have you invested in learning how to work from home effectively (e.g., learning how to use video-conferencing software) and creating a suitable space to work?

- **Mean:** 15.0 hours (SE = 0.2)

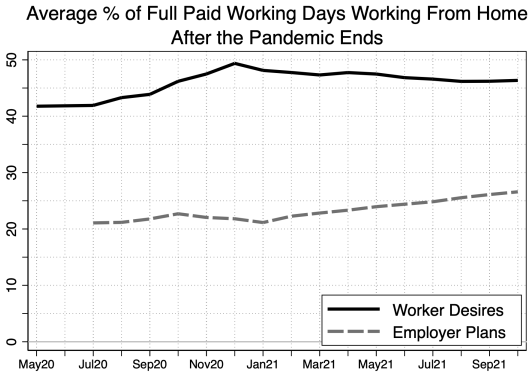
How much money have you and your employer invested in equipment or infrastructure to help you work from home effectively – computers, internet connection, furniture, etc.?

- **Mean:** $561 (SE = 9)

Additionally, firms have made investments on business premises

NIPA Investment

3. Workers Want 74% More WFH Than Employers are Planning



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. In each month we compute the average percent of worker desired and employer planned full paid working days after the end of the end of the pandemic. The figure shows three-month moving averages for each variable, but we use two-month moving averages at the ends.

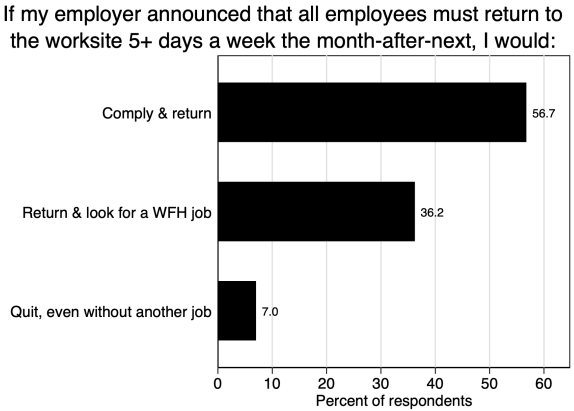
***After COVID, in 2022 and later**, how often would you **like to** have paid work-days at home?*

- *Never*
- *...*
- *5+ days per week*

***After COVID, in 2022 and later,** how often is **your employer planning** for you to work full days at home?*

▸ Month-by-month average

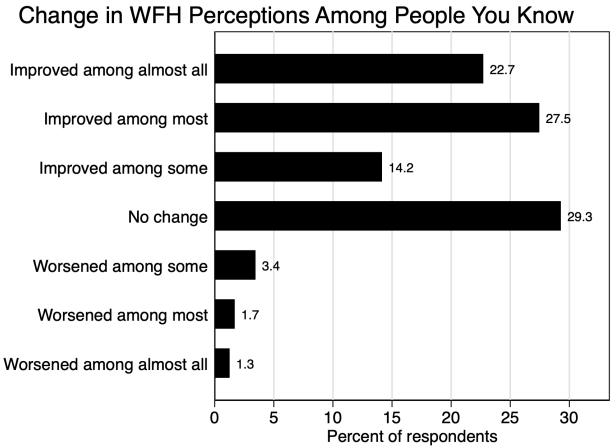
3. And Say They're Willing to Search/Quit If Forced Back Full-Time



How would you respond if your employer announced that all employees must return to the worksite 5+ days a week starting [month-after-next]?

Notes: Data are from 25,000 survey responses collected between June and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. The sample includes respondents who were working from home 1 or more days per week during the week of the survey.

4. WFH STIGMA HAS DIMINISHED



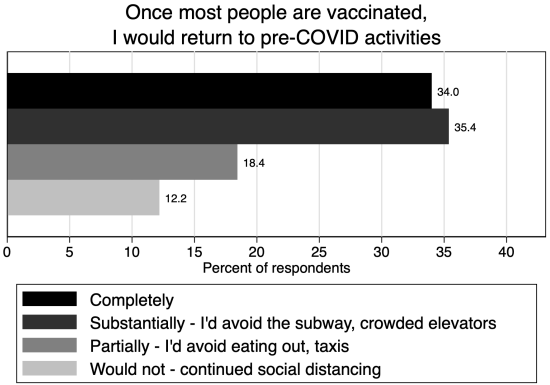
Since the COVID pandemic began, ***how have perceptions about working from home (WFH) changed among people you know?***

▸ Time series

▸ Reaction to stigma drop

Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

5. Persistent fears of social proximity



Notes: Data are from 15,000 survey responses collected between August and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Once the COVID-19 pandemic has ended, *which of the following would best fit your views on social distancing?*

- *Complete return to pre-COVID activities...*
- *Substantial return to pre-COVID activities...*
- *Partial return to pre-COVID activities...*
- *No return to pre-COVID activities...*

Time series

Mechanisms Why WFH Will Stick

1. **Experimentation** and **learning** to overcome inertia & biased expectations
2. **Investments** enabling WFH
3. **Worker demand** in a tight labor market
4. Diminished **stigma**
5. Lingering **concerns about health risks** post-COVID
6. **Technical change** (not in this talk, see Bloom, Davis, & Zhestkova, 2021) Detail

Outline

Survey and Methodology

WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- Managers

Outline

Survey and Methodology

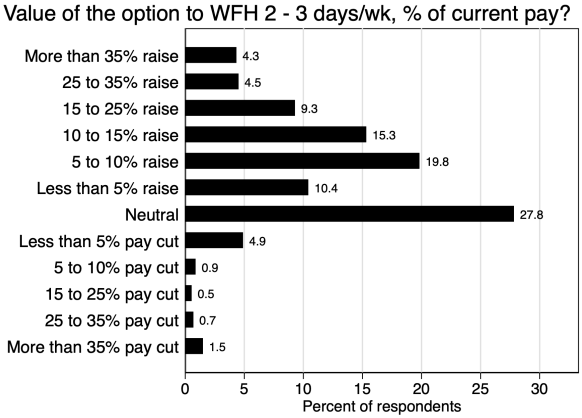
WFH Will Stick

Why WFH Will Stick

Consequences

- **For workers**
- For productivity
- Managers

Working from home is a perk



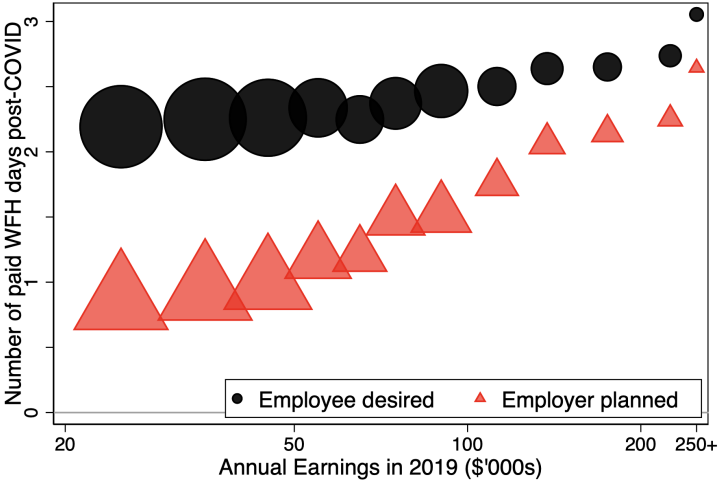
Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Part 1: ***After COVID, in 2022 and later,*** *how would you feel about working from home* ***2 or 3 days a week?***

- *Positive - I would view it as a benefit or extra pay*
- *Neutral*
- *Negative - I would view it as a cost or a pay cut*

Part 2: *How much of a* ***pay raise [cut]*** *(as a percent of your current pay) would you value as much as the option to work from home 2 or 3 days a week?*

Perk of WFH will be unevenly distributed



Note: Marker size is proportional to the number of respondents per income level.

Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Estimating the Perk Value of WFH

Raw perk value: based on raw survey responses in the previous slide

- Mean = **7.2%** of current earnings
- Mas and Pallais (2017 *AER*) estimate **8%** of current earnings

Value of planned post-COVID WFH:

- Impute zero if:
  - No WFH experience during COVID
  - Employer plans for WFH *"Never"* or *"About once or twice per month"*, or *"My employer has not discussed this with me..."*
- Scale **raw perk value** by 1/2 if employer plans for 1 day/week WFH
- Scale **raw perk value** by 1 if employer plans for 2+ days per week WFH

Value of Planned post-COVID WFH

	Value of Planned Post-COVID WFH	Raw perk value
Overall	2.5 (0.2)	7.2 (0.1)
Women	2.0 (0.1)	7.6 (0.1)
Men	2.9 (0.2)	6.9 (0.1)
Less than HS	2.5 (0.5)	7.6 (0.2)
HS degree	1.7 (0.1)	5.6 (0.3)
1 to 3 years of college	1.8 (0.1)	6.7 (0.2)
4-year college degree	3.0 (0.1)	7.9 (0.1)
Graduate degree	4.0 (0.1)	9.5 (0.1)

Notes: The "value of planned WFH" is equal to the "perk value of WFH" 2 to 3 days per week, adjusted to reflect employer plans. The "perk value of WFH" is based responses to the following two-part question: Part 1: "After COVID, in 2022 and later, how would you feel about working from home 2 or 3 days a week?" Part 2: "How much of a pay raise [cut] (as a percent of your current pay) would you value as much as the option to work from home 2 or 3 days a week?". Data are from 28,250 survey responses collected from July 2020 to February 2021 by Inc-Query and QuestionPro. We re-weight raw responses to match the share of working age respondents in the 2010-2019 CPS in a given {age x sex x education x earnings} cell.

Full table

Outline

Survey and Methodology

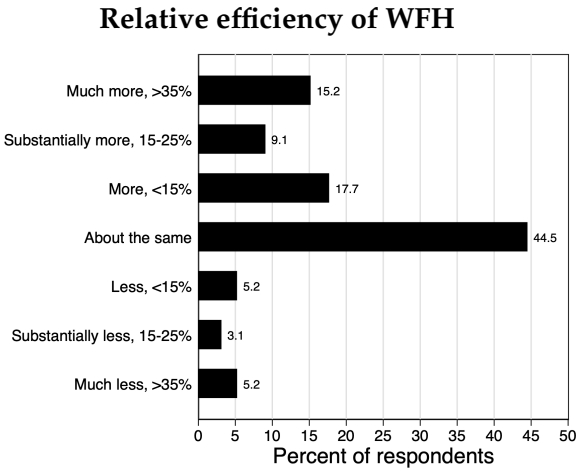
WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- **For productivity**
- For managers

42% report higher efficiency while WFH

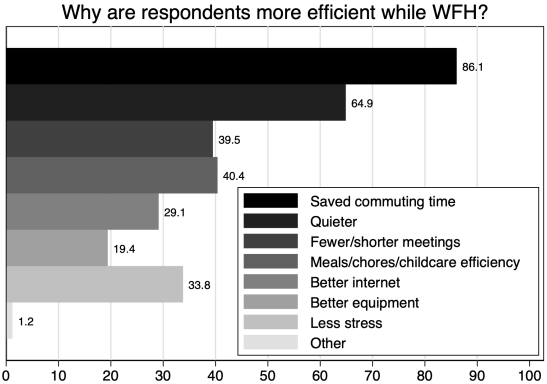


How does your efficiency working from home ***[during the COVID-19 pandemic]*** *compare to your efficiency working on business premises* ***before the pandemic?***

Time series

Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Commuting Time Savings are a Significant Source of Productivity



Notes: Data are from 4,469 survey responses collected between August and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

*Is **time saved by not commuting** part of your **extra efficiency when working from home?***

*Apart from saving time by not commuting, **why are you more efficient when working from home?** Please select all that apply.*

Estimating the Productivity Impact of Saved Commuting Time

Weekly time savings from greater WFH post-COVID:

$$TS_i = (WFH_i^{Plan} - WFH_i^{Pre})(1 - f_i)C_i$$

C_i = weekly round-trip commute time in hours
f_i = fraction of commute time reallocated to work Detail

Estimating the Productivity Impact of Saved Commuting Time

Weekly time savings from greater WFH post-COVID:

$$TS_i = (WFH_i^{Plan} - WFH_i^{Pre})(1 - f_i)C_i$$

C_i = weekly round-trip commute time in hours
f_i = fraction of commute time reallocated to work Detail

Implied productivity gain in percentage terms:

$$Gain_i^{Imp} = 100 \cdot \frac{TS_i}{L_i} = 100 \cdot \frac{(WFH_i^{Plan} - WFH_i^{Pre})(1 - f_i)C_i}{H_i^{Pre} + C_i(Days_i^{Pre} - WFH_i^{Pre})}$$

L_i = weekly work hours (including commute time)
H_i^{Pre} = conventional measure of weekly work hours pre-COVID
$Days_i^{Pre}$ = no. of full days the respondent works in the survey week
WFH_i^{Pre} = pre-COVID WFH days
WFH_i^{Plan} = planned post-COVID WFH days

Estimating the True Productivity Gain

True productivity gain (including commute time savings) for respondent i:

$$Gain_i^{True} = PrDiff_i \left(\frac{WFH_i^{Plan} - WFH_i^{Pre}}{Days_i} \right) + \chi_i Gain_i^{Imp}$$

$PrDiff_i$ = relative productivity of WFH (equals 0 if respondent i is unable to WFH)

WFH_i^{Pre} = pre-COVID WFH days

WFH_i^{Plan} = planned post-COVID WFH days

$Days_i$ = no. of full days the respondent works in the survey week

$\chi_i = \mathbf{1}(PrDiff_i$ excludes commuting time savings$)$

Note: In our preferred specification, we impute $Gain_i^{True} = 0$ when $Gain_i^{True} < 0$ on the view that individuals for whom WFH is a negative won't.

Conventionally-Measured Productivity Gain

Conventionally-measured productivity gain (excl. commute time savings):

$$Gain_i^{Conv} = (1 - \delta_i) PrDiff_i \left(\frac{WFH_i^{Plan} - WFH_i^{Pre}}{Days_i} \right)$$

$PrDiff_i$ = relative productivity of WFH (equals zero if i is unable to WFH)

WFH_i^{Pre} = pre-COVID WFH days

WFH_i^{Plan} = planned post-COVID WFH days

$Days_i$ = no. of full days the respondent works in the survey week

δ_i = fraction of $PrDiff_i$ that the respondent attributes to reduced commuting time

Shift to WFH could raise productivity 5.0%

Productivity gains from the persistent shift to WFH (%)

Measure	Equal-weighted Mean	Earnings-weighted Mean
Commuting time savings only	1.9 (0.03)	2.3 (0.03)
True productivity gain	4.0 (0.08)	**5.0 (0.09)**
Conventionally-measured	1.1 (0.03)	1.2 (0.03)

Notes: Standard errors in parentheses. For each respondent who worked 35 or more hours per week in 2019, we obtain commuting time savings from their one-way commuting time, the amount of working from home their employer is planning after COVID, and the amount of commuting time not reallocated to working. True productivity gain (including commuting time savings) is based on the survey question "How does your efficiency working from home during the COVID-19 pandemic compare to your efficiency working on business premises before the pandemic?" We impute relative efficiency to zero for workers who have no work-from-home experience during the pandemic, since they are likely unable to. We then scale relative efficiency by the respondent's increase in working-from-home between the pre- and post-COVID periods. Finally, we add commuting time savings to these responses for workers who report that their relative efficiency excludes commuting time savings. We estimate the conventionally-measured productivity gains also using the survey question on relative working-from-home efficiency, but explicitly excluding the part of those productivity gains that comes from saved commuting time.

Messages for Policy

1. **Shift to WFH brings large benefits, but they will be:**
   - Disproportionately enjoyed by men, high earners and the highly-educated
   - *Productivity benefits* will be unrecorded in productivity statistics

2. **Facilitating repurposing of commercial/residential space in cities should be a priority**
   - Otherwise, creative destruction spurred by COVID-19 could mainly be "destruction" in many urban areas Detail

Outline

Survey and Methodology

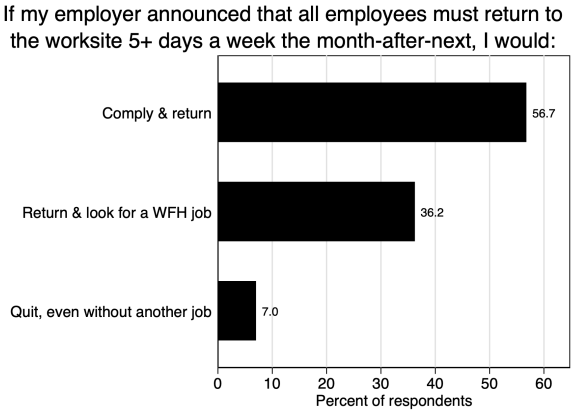
WFH Will Stick

Why WFH Will Stick

Consequences

- For workers
- For productivity
- **For managers**

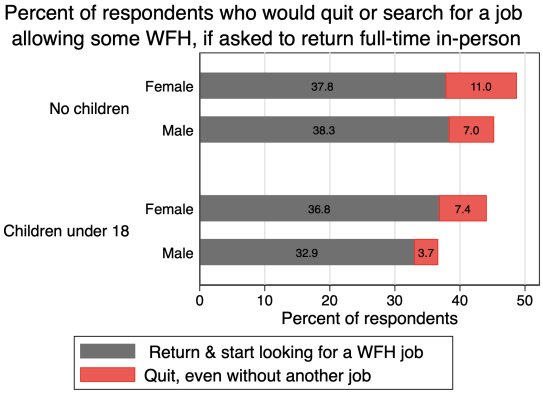
Failing to Offer WFH Could Make It Difficult to Attract Talent

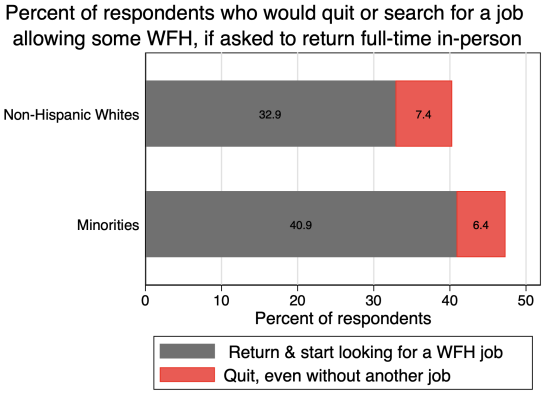


How would you respond if your employer announced that all employees must return to the worksite 5+ days a week starting [month-after-next]?

Notes: Data are from 25,000 survey responses collected between June and October 2021. We reweight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. The sample includes respondents who were working from home 1 or more days per week during the week of the survey.

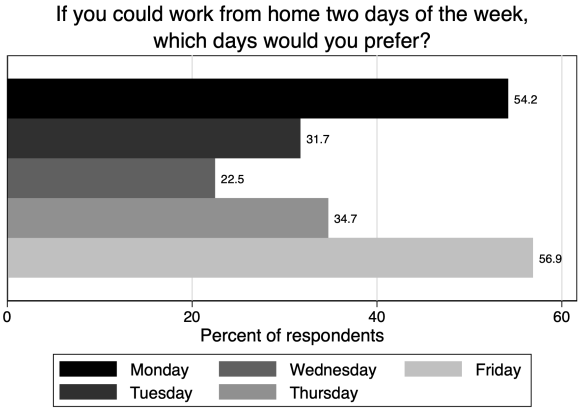
Particularly For Diverse Talent





Notes: Responses to the question: *"How would you respond if your employer announced that all employees must return to the worksite 5+ days a week starting [month-after-next]?"* Data are from 10,175 survey responses collected between June and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

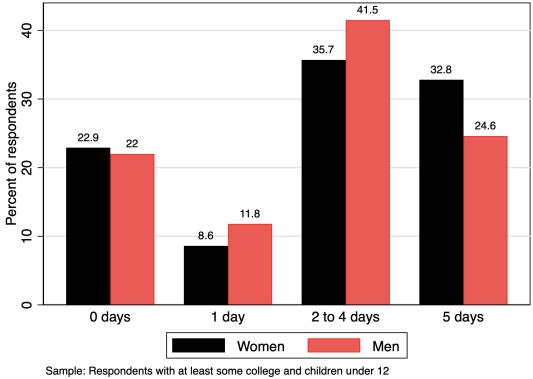
Letting Workers Choose Their WFH Days Can Be Problematic

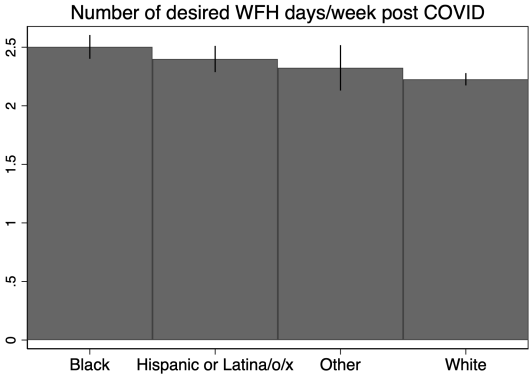


How would you respond if your employer announced that all employees must return to the worksite 5+ days a week starting [month-after-next]?

Notes: Data are from 3,604 survey responses collected in June 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. The sample includes all respondents other than those expressing no preference.

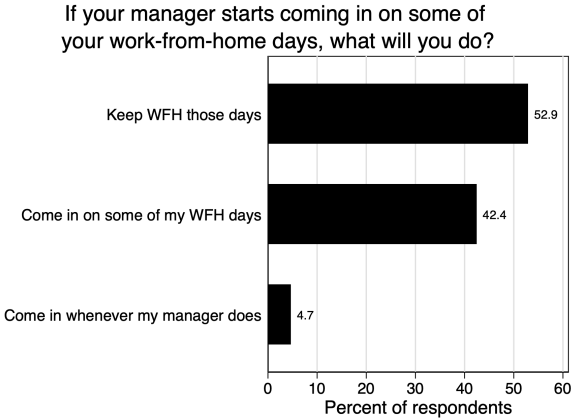
Letting Workers Choose Their WFH Days Can Be Problematic





Notes: Responses to the question: *"After COVID, in 2022 and later, how often would you like to have paid workdays at home?"* Data are from 68,750 survey responses collected between June and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

The Threat of Presenteeism Bias



Notes: The sample includes respondents who (1) report their employer plans for them to work from home 1, 2, 3, or 4 days per week after COVID in 2022 and later, and (2) who report their manager will work from home on the same days as them after the pandemic. N = 989.

Will your manager work from home on the same days as you after the pandemic is over?

If yes, ask: *If* ***your manager starts coming into your employer's place of business on some of your work-from-home days,*** *what will you do?*

Managerial Implications of a Persistent Shift to WFH

1. **Issues attracting/retaining talent for firms that don't offer any WFH**

2. **Challenges of hybrid work:**
   - Choice can be *impractical*, create problems with *diversity*
   - Threat of presenteeism bias: managers must follow the rules
   - More broadly: requires good managerial practices (e.g., performance-based evaluation) to work

3. **Onboarding employees can be difficult (not in this talk)** Detail

Conclusion

WFH days: **5%** pre-COVID, **45%** during COVID, predicting **26%** post-COVID

Mechanisms behind a persistent shift to WFH:

1. Experimentation and learning to overcome inertia & biased expectations
2. Investments enabling WFH
3. Worker demand in a tight labor market
4. Diminished stigma
5. Lingering concerns about health risks post-COVID

Consequences:

- Uneven benefits for workers
- Higher productivity
- Managerial challenges: choice, diversity, presenteeism, onboarding

Related Literature

Alternative Working Arrangements: Mas & Pallais (2017)

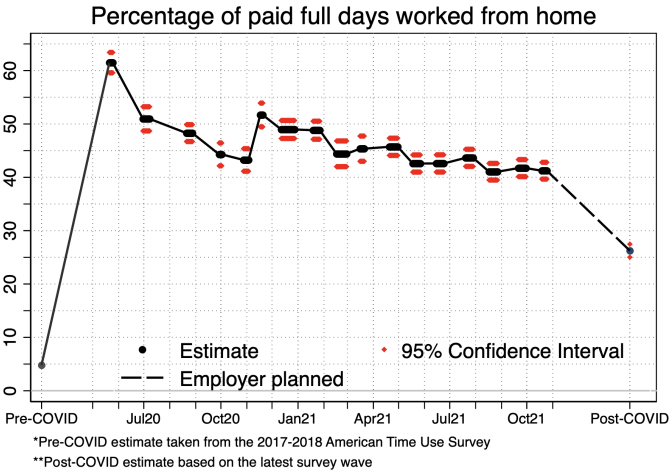
Working from Home before COVID: Bloom, Liang, Roberts, Zhichun, & Ying (2013), Song and Gao (2020), Emmanuel and Harrington (2020)

Working from Home during COVID: Bai, Brynjolfsson, Jin, Steffen, & Wan (2020), Barrero, Bloom, and Davis (2020), Bick, Blandin, and Mertens (2021), Brynjolfsson, Horton, Ozimek, Rock, Sharma and TuYe (2020), Cicala (2020) Möhring, Naumann, Reifenscheid, Wenz, Rettig, Krieger, Friedel, Finkel, Cornesse, Blom (2020), Ozimek (2020) Papanikolaou & Schmidt (2020)

Pandemic-induced shift toward technologies that support WFH: Bloom, Davis and Zhestikova (2020)

Back

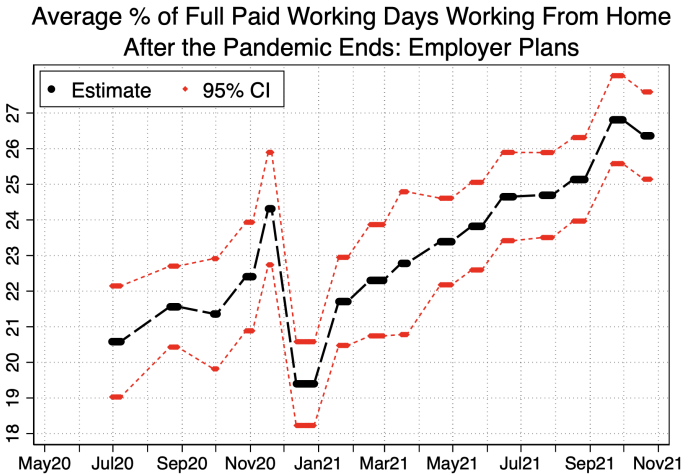
During COVID, 10-12× pre-COVID WFH



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. Prior to November 2020, we asked respondents to classify themselves: "Currently (this week) what is your work status?" Since November 2020 we ask them for the number of days worked in the current week and the number of days WFH.

Back

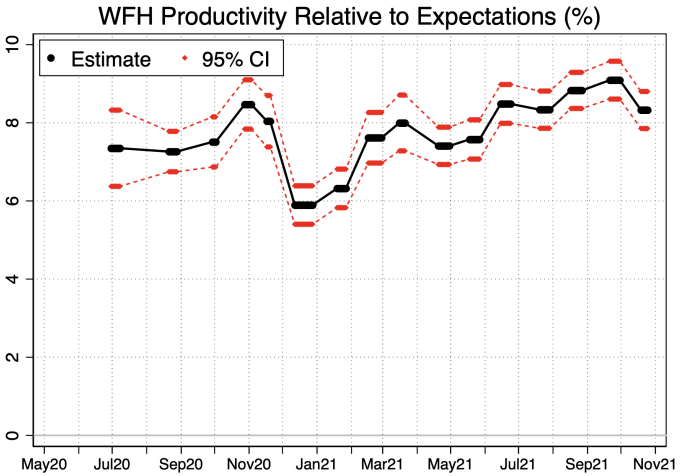
Post-COVID, > 5× pre-COVID WFH, Rising



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell. Post-COVID projection from June 2021 responses to "After COVID, in 2022 and later, how often is your employer planning for you to work full days at home?"

Back

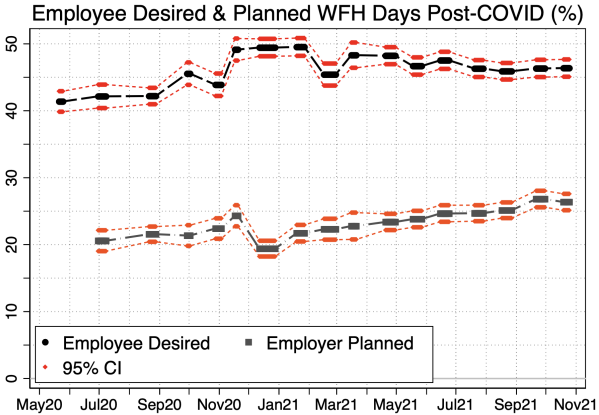
Evolution of the productivity surprise



Notes: Responses to the question "Compared to your expectations before COVID (in 2019),how has working from home turned out for you [in terms of productivity/efficiency]?" Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Back

Workers Desire 74% More WFH Than Employers are Planning



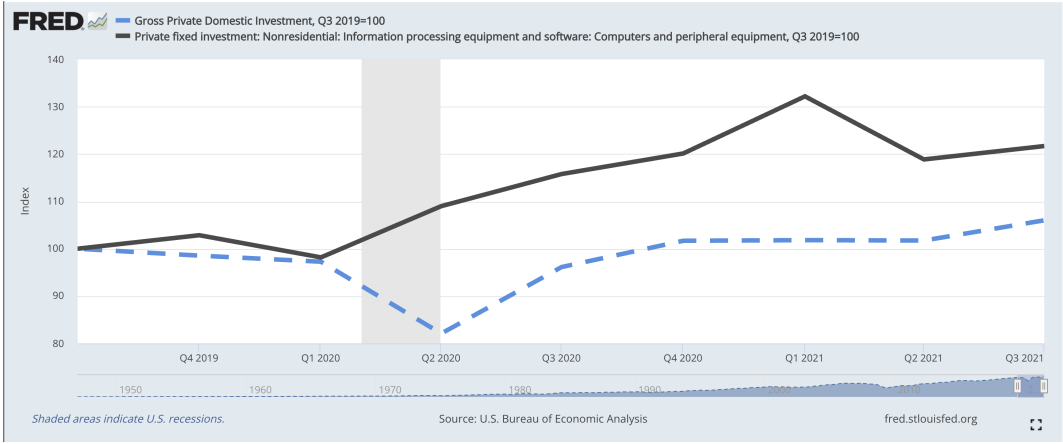
After COVID, in 2022 and later, *how often would you* ***like to*** *have paid workdays at home?*

After COVID, in 2022 and later, *how often is* ***your employer planning*** *for you to work full days at home?*

Back

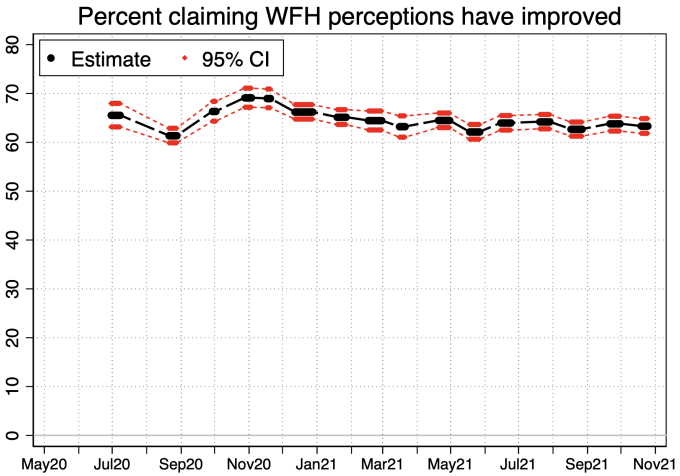
Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Business Investment in NIPA Data



Back

Evolution of perceptions about WFH

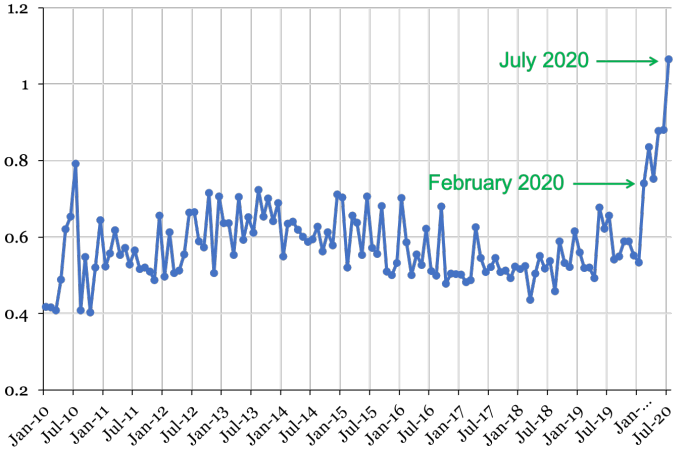


Notes: Responses to the question "Since the COVID pandemic began, how have perceptions about working from home (WFH) changed among people you know?" Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Back

Redirected Technical Change

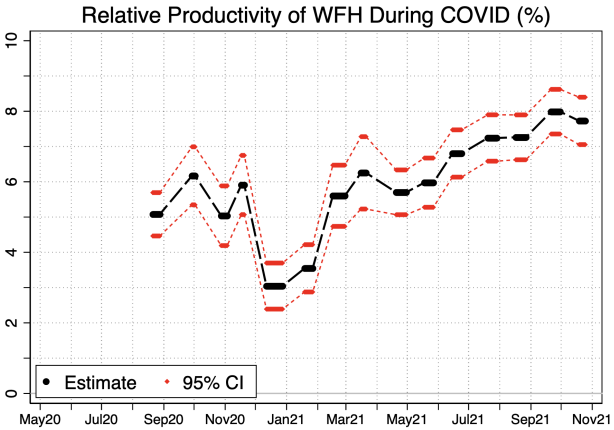
WFH Patents as % of Patent Applications



Source: Bloom, Davis, and Zhestkova (2021)

Back

Relative Efficiency of WFH Over Time

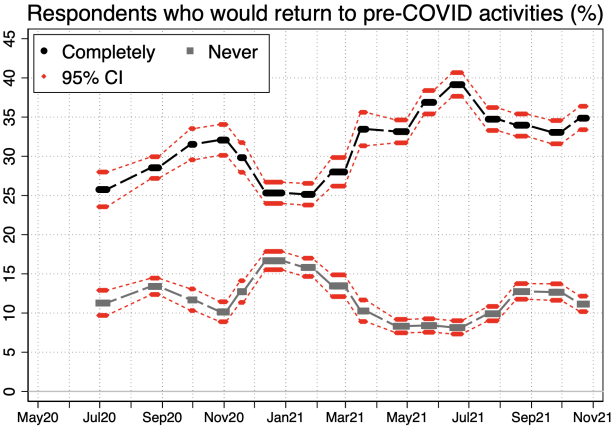


Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

*How does your efficiency working from home **during the COVID-19 pandemic** compare to your efficiency working on business premises **before the pandemic?***

Back

Fears of social proximity over time



Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Once the COVID-19 pandemic has ended, *which of the following would best fit your views on social distancing?*

- *Complete return to pre-COVID activities...*
- *Substantial return to pre-COVID activities...*
- *Partial return to pre-COVID activities...*
- *No return to pre-COVID activities...*

Back

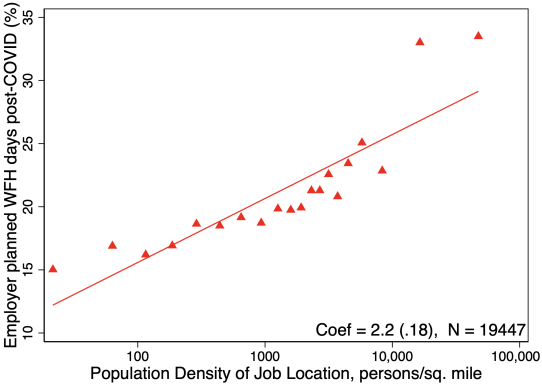
Value of Planned post-COVID WFH

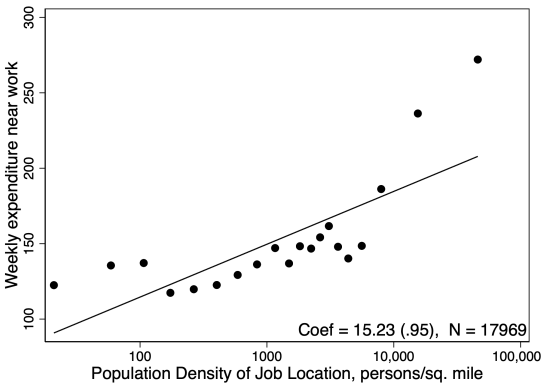
Percent share of paid WFH days post-COVID	Value of planned post-COVID WFH, % earnings	(SE)	Perk value of the option to WFH, % earnings	(SE)	Percent share of paid WFH days post-COVID	Value of planned post-COVID WFH, % earnings	(SE)	Perk value of the option to WFH, % earnings	(SE)
Overall	2.5	(0.1)	7.2	(0.1)					
Women	2.0	(0.1)	7.6	(0.1)	Ann. Earnings of $20 to $50K	1.7	(0.1)	6.6	(0.2)
Men	2.9	(0.1)	6.9	(0.1)	Ann. Earnings of $50 to $100K	2.8	(0.1)	7.2	(0.1)
					Ann. Earnings of $100 to $150K	4.5	(0.2)	8.7	(0.2)
Age 20 to 29	2.8	(0.1)	8.2	(0.2)	Ann. Earnings over $150K	6.8	(0.2)	11.7	(0.2)
Age 30 to 39	3.0	(0.1)	8.4	(0.2)					
Age 40 to 49	2.6	(0.1)	7.6	(0.2)	Goods-producing sectors	2.4	(0.1)	6.2	(0.2)
Age 50 to 64	1.7	(0.1)	5.1	(0.2)	Service sectors	2.5	(0.1)	7.4	(0.1)
Less than high school	2.5	(0.6)	5.7	(1.1)	No children	1.9	(0.1)	6.1	(0.1)
High school	1.7	(0.1)	5.6	(0.3)	Living with children under 18	3.2	(0.1)	8.4	(0.1)
1 to 3 years of college	1.8	(0.1)	6.7	(0.2)					
4year college degree	3.0	(0.1)	7.9	(0.1)	Red (Republican-leaning) State	2.3	(0.1)	7.2	(0.1)
Graduate degree	4.0	(0.1)	9.5	(0.1)	Blue (Democratic-leaning) State	2.7	(0.1)	7.2	(0.1)

Notes: The "value of planned WFH" is equal to the "perk value of WFH" 2 to 3 days per week scaled by how much work from home each respondent's employer is planning. The "perk value of WFH" itself comes from responses to the following two-part question: Part 1: "After COVID, in 2022 and later, how would you feel about working from home 2 or 3 days a week?" Part 2: "How much of a pay raise [cut] (as a percent of your current pay) would you value as much as the option to work from home 2 or 3 days a week?". See the text for details. Data are from 28,250 survey responses collected between July 2020 and February 2021 by Inc-Query and QuestionPro. We re-weight raw responses to match the share of working age respondents in the 2010-2019 CPS in a given {age x sex x education x earnings} cell. This table excludes data from the May 2020 and March 2021 waves because we didn't ask about post-COVID employer plans in those months.

Back

Spatial reallocation of jobs & spending away from dense city centers





Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Back

4. Lower Stigma Predicts Higher WFH Desires & Plans

Perceptions about WFH	Percent WFH days post-COVID (SE) Employee desired		Employer planned		N
Improved among almost all (90 to 100%)	59.3	(0.3)	35.1	(0.3)	15,479
Improved among most	49.9	(0.3)	25.4	(0.3)	15,696
Improved among some	43.2	(0.5)	21.8	(0.4)	7,486
No change	33.0	(0.4)	13.2	(0.3)	12,499
Worsened	37.7	(0.7)	20.3	(0.6)	3,296

Notes: This table estimates the percent share of days spent working from home post-COVID desired by workers and planned by their employers, as a function of how the worker believes perceptions about working from home have changed since the onset of the pandemic. Data are from 65,750 survey responses collected between July 2020 and March 2021 by Inc-Query and QuestionPro. We exclude workers who claim to have "no employer" in the employer plans question and impute zero employer planned working days for respondents who claim not to have received any clear indication from their employer. We re-weight raw responses to match the share of working age respondents in the 2010-2019 CPS in a given {age x sex x education x earnings} cell. This table excludes data from the May 2020 wave because we didn't ask about the return to pre-COVID activities that month.

Back

1. Forced experimentation and learning overcome inertia

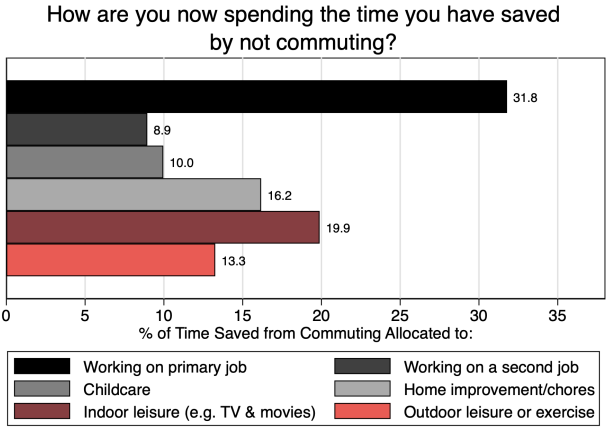
"If you'd said three months ago that 90% of our employees will be working from home and the firm would be functioning fine, I'd say that is a test I'm not prepared to take because the downside of being wrong on that is massive."

– James Gorman, CEO of Morgan Stanley Back

James Gorman

PHOTO: AL DRAGO/BLOOMBERG NEWS

Fears of social proximity over time

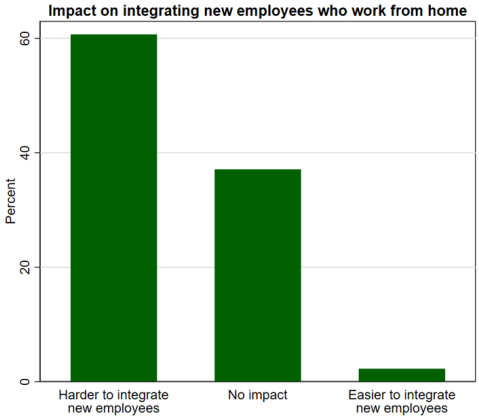


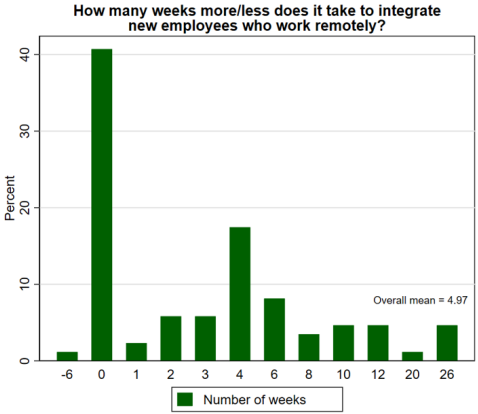
During the COVID-19 pandemic, *while you have been working from home, how are you* ***now spending the time you have saved by not commuting?*** *Please assign a percentage to each activity (the total should add to 100%).*

Back

Notes: Data are from 68,250 survey responses collected between May 2020 and October 2021. We re-weight raw responses to match 2010-2019 CPS pop. by {age × sex × education × earnings} cell.

Recruiting Remote Workers

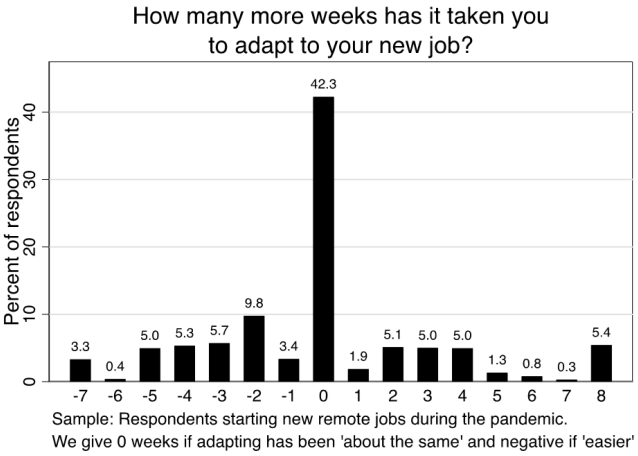




NOTE: Results in the chart on the right are weighted by firm size.
Source: Survey of Business Uncertainty conducted by the Federal Reserve Bank of Atlanta, Stanford University, and the University of Chicago Booth School of Business.

Back

Recruiting Remote Workers



Source: Survey of Working Arrangements and Attitudes (SWAA), wfhresearch.com

Back