The Future of Working From Home

Nick Bloom (Stanford)

joint with Jose Barrero (ITAM) and Steve Davis (Chicago)

World Bank, July 2020
WFH coverage in US newspapers doubled from 2000 to January 2020

Marissa Mayer at Yahoo recalls a working-from-home team to the office, Feb 22nd 2013

Mitch McConnell and Rand Paul working from home due to injuries

But increased another 120 times (12,000%) by June 2020!

March 10th = start of COVID lockdown

Working From Home Before COVID

Working From Home During COVID

Working From Home Post COVID

Tips on Working From Home
Main source of data a fantastic BLS survey

- Surveyed continuously over 2017 and 2018 all wage and salaried workers (excluded self-employed)
- Collected around 10,000 responses stratified across states, industries and geographies

https://www.bls.gov/news.release/flex2.htm
Only 15% of Americans have paid full WFH days

Working from home is pretty balanced by gender and age

But WFH much higher for more educated higher-earners

Working from home far higher for managers and professionals

- Management and financial operations: 40.9%
- Professional and related: 29.1%
- Sales and related: 19.6%
- Office and administrative support: 15.9%
- Installation, maintenance, and repair: 5.9%
- Construction and extraction: 5.1%
- Services: 3.8%
- Production: 2.9%
- Transportation and material moving: 2.1%

Working From Home Before COVID

Working From Home During COVID

Working From Home Post COVID

Tips on Working From Home
During COVID 42% of US employees now full-time WFH, accounting for about two thirds of US GDP

Source: Response to the question "Currently (this week) what is your work status?" Response options were "Working on my business premises", "Working from home", "Still employed and paid, but not working", "Unemployed, but expect to be recalled to my previous job", "Unemployed, and do not expect to be recalled to my previous job", and "Not working, and not looking for work"

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-29, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.

Shares shown weighted by earnings and unweighted (share of workers)
COVID WFH employees heavily drawn from city offices

Source: Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.
These WFH employees used to spend heavily near workplaces

Source: Calculated from the answer to three questions: (i) “In 2019, when you worked at your employer’s business premises, roughly how much money did you spend during a typical day on food and drinks (e.g., lunch, coffee, snacks, etc)?”; (ii) “In 2019, when you worked at your employer’s business premises, roughly how much money did you spend in a typical week on shopping near work (e.g., gift or clothes shopping during your lunch break or after work)?” and (iii) “In 2019, when you worked at your employer’s business premises, roughly how much money did you spend in a typical week in bars, restaurants and other entertainment venues that are near to your workplace?”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.
Note working from home under COVID is hard for four reasons
1) Kids
2) Job match – only a third of jobs can fully work from home

Source: Response to the question “Could you do your job working from home?” Response options were “Completely, I would be 100%+ as efficient at home as at work”, “Mostly, I would be 80% to 90% as efficient at home as at work”, “Partly, I would be 50% to 70% as efficient at home as at work”, “Barely, I would be less than 50% as efficient at home as at work”, “No, I could not perform my job at home”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.

3) Space

If you have any photos to share of WFH challenges please send them to me at nbloom@stanford.edu thanks
Only 49% of Americans have their own room which is not their bedroom

Source: Response to the questions: “If you are working from home under COVID do you have your own room to work in?”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.
And many have internet issues - so that 35% of Americans cannot effectively WFH (they have <90% connectivity so cannot video call)

Source: Response to the questions: “Internet: how effectively could you work from home online given your current internet connection?”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.
4) Full-time – pre-COVID only 2% of WFH people were full time

Why? Office time important for
1) Creativity
2) Motivation
3) Loyalty

Working from home also a challenge for firms trying to hire

What impact has working from home had on the number of new full-time hires in your employer's business?

- Substantially harder – WFH has reduced full time hires by more than 50%: 15.30%
- Harder – WFH has reduced full-time hires by 10% to 50%: 11.74%
- Slightly harder – WFH has reduced full-time hires by 1% to 9%: 14.05%
- No impact: 34.38%
- Slightly easier – WFH has increased full-time hires by 1% to 9%: 9.43%
- Easier – WFH has increased full-time hires by 10% to 50%: 5.24%
- Substantially easier – WFH has increased full-time hires by more than 50%: 2.73%
- Not applicable – I have no current employer: 7.13%

Source: Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
Working From Home Before COVID

Working From Home During COVID

Working From Home Post COVID

Tips on Working From Home
Post-COVID US firms forecast WFH at about 20% of days (compared to 5% pre-COVID and 40% during COVID)

Source: Consumers: Current Working From Home Status response to the question “In 2019 (before COVID) how often did you have a paid day working from home?”. Desired Working from Home Status response to the question “In 2021+ (after COVID) how often would you like to have paid work days at home?” Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.

Firms: Survey of Business Uncertainty from the Atlanta Federal Reserve Bank, Chicago University and Stanford University. Panel of around 1000 firms. See https://www.frbatlanta.org/blogs/macroblog

Headline figures of 5% and 40% of days WFH comes from adding up shares per option times the share of days working from home in each option (e.g. 6%=2.1% of 100% plus 4.5% of 70 plus 3.4% of 30% plus 4.7% of 1/22)
Employees that can WFH – on average – also want about 50% WFH

Source: Response to the question: “After COVID, in 2021 and later, how often would you like to have paid workdays at home?”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between June 28 - July 3 by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.
Four factors driving this permanent post-COVID WFH shift

1) Expectations: >70% report WFH has mostly turned out better than predicted

Source: Response to the questions “Compared to your expectations before COVID (in 2019), how has working from home turned out for you?”. Response options are, for example, “Hugely better – I am 20%+ more productive than I expected” and “Substantially better – I am 10% to 19% more productive than I expected”.

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
Four factors driving this permanent post-COVID WFH shift

2) Stigma: pre-COVID negative stigma seems to have fallen away

A 2017 image search on “Working from Home”
source https://www.youtube.com/watch?v=oiUyyZPIHyY
Four factors driving this permanent post-COVID WFH shift

2) Stigma: pre-COVID negative stigma seems to have fallen away

'WORK FROM HOME!!!! EARN THOUSANDS OF DOLLARS MONTHLY!'
Four factors driving this permanent post-COVID WFH shift

2) Stigma: 70% report pre-COVID negative stigma seems to have fallen away

![Bar chart showing change in WFH perceptions among people you know]

- Improved among almost all: 22.6%
- Improved among most: 30.0%
- Improved among some: 17.7%
- No change: 25.1%
- Worsened among some: 2.3%
- Worsened among most: 2.2%
- Worsened among almost all: 0.1%

Source: Response to the questions “Before COVID-19, “working from home” was sometimes seen as “shirking from home.” Since the COVID pandemic began, how have perceptions about working from home (WFH) changed among people you know?

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
Four factors driving this permanent post-COVID WFH shift

3) Investments: substantial time and capital investments in WFH (plus R&D etc)

Source: Response to the questions “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?” and “How much money have you and your employer invested in equipment or infrastructure to help you work from home more efficiently – computers, internet connection, furniture, etc.?”. Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
Four factors driving this permanent post-COVID WFH shift

4) Social distancing: our survey data suggests norms will not fully revert

Would return to pre-COVID activities

<table>
<thead>
<tr>
<th>Option</th>
<th>Percent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely</td>
<td>24.8</td>
</tr>
<tr>
<td>Substantially</td>
<td>35.1</td>
</tr>
<tr>
<td>Partially</td>
<td>25.4</td>
</tr>
<tr>
<td>None</td>
<td>14.6</td>
</tr>
</tbody>
</table>

Source: Response to the questions “If a COVID vaccine is discovered and made widely available, which of the following would best fit your views on social distancing?”. Response options are: “Complete return to pre-COVID activities”; “Substantial return to pre-COVID activities, but I would still be wary of things like riding the subway or getting into a crowded elevator”; “Partial return to pre-COVID activities, but I would be wary of many activities like eating out or using ride-share taxis” and “No return to pre-COVID activities, as I will continue to social distance”

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
Working From Home Before COVID

Working From Home During COVID

Working From Home Post COVID

Tips on Working From Home
Three key tips of WFH post COVID

1) Part-time – regular 2 days per week at home (e.g. T, Th)

2) Optional – only about 50% of employees want to WFH

3) Privilege – under-performers warned, recalled to the office
Indeed, the option to WFH 2 to 3 days per week very appealing (equivalent to a 13.2% pay increase on average)

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between Jun 28-July 3, by QuestionPro on behalf of Stanford University. Sample reweighted to match current CPS.
COVID will relocate the modern office, not eliminate it

**Pre-COVID** 5% of working days from home

**During COVID** 40% of working days at home

**Post-COVID** I predict about 20% of working days at home
Indeed, demand to work in high-rise buildings has dropped 25% 

Source: Response to the questions: "In 2019 (before COVID) where did you mostly work (when not at home)?" and "In 2021+ (after COVID) where would you like to mostly work (when not at home)?"

Data from a survey of 2,500 US residents aged 20 to 64, earning more than $20,000 per year in 2019 carried out between May 21-25, by QuestionPro on behalf of Stanford University. Sample reweighted to match current working from home rations in the 2017/2018 American Time Use Survey.
Conclusion: long-run (5-year) impacts via WFH (& Social Distancing)

1) **Cities**: Reduction in economic activity and day-time population density in city centers

2) **Property**: Reduction in value of 10+ story buildings, increase in value of office parks

3) **Commuting**: Reduction (particularly for more educated employees)

4) **Hiring**: slow down (particularly for new graduates) due to WFH training challenges

5) **Inequality**: increase if WFH benefits (pay & welfare) accrue more to older-educated
Further Reading References

https://siepr.stanford.edu/research/publications/how-working-home-works-out

Blog: Working remotely or remotely working? Best practices in working from home post COVID-19, May 2020
https://www.povertyactionlab.org/blog/5-18-20/working-remotely-or-remotely-working-best-practices-working-home-post-covid-19

Research paper: Does Working from Home Work?, QJE 2014