

Covid-19 and the workplace revolution

Nick Bloom
(Stanford)





Working from home Is it here to stay?

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Dear friends,
During the Covid-19 crisis, the great transformation to Working From Home (WFH) has held off economic collapse for many people.

Academics are fortunate to belong to a sector in which the vast majority of us can continue to function efficiently away from our office (although here at TSE, it was painful to be separated from our wonderful new building!).

TNIT is lucky to count among its members Nick Bloom, one of the world's leading figures on WFH and its impact on employees, firms and society. In his 2014 Quarterly Journal of Economics paper "*Does Working from Home Work?*"*, which was supported by TNIT, he drew fascinating insights from a successful experiment at a 16,000-strong Chinese travel agency.

In this special issue of TNIT News, he revisits the topic and presents new results from a US survey on WFH during the pandemic.

Wishing you good health and productivity in these challenging times.

*The paper was co-authored by James Liang, John Roberts and Zhichun Jenny Ying.

Covid-19 and the workplace revolution

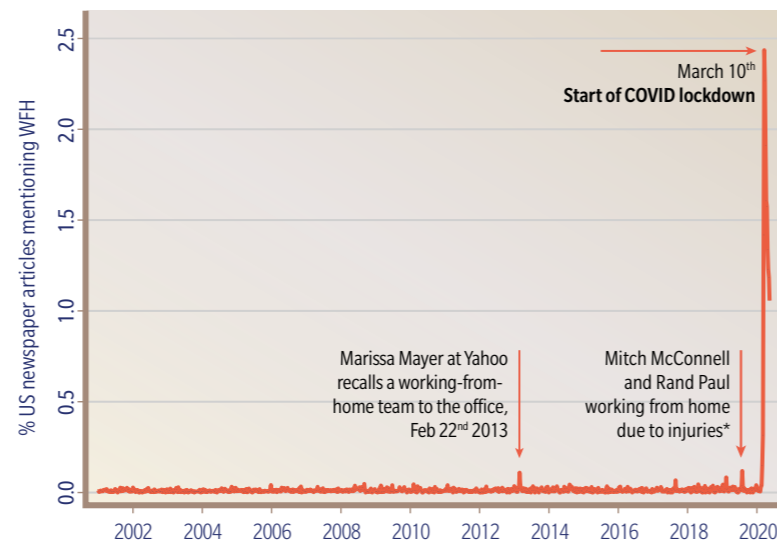


Nick Bloom is a Professor of Economics at Stanford University and Professor, by courtesy, at the Graduate School of Business. He is also the Co-Director of the Productivity, Innovation and Entrepreneurship program at the National Bureau of Economic Research (NBER), and a fellow of the Centre for Economic Performance and the Stanford Institute for Economic Policy Research.

His research interests focus on measuring and explaining management practices across firms and countries. He has been collecting data from thousands of manufacturing firms, retailers, schools and hospitals across countries, to develop a quantitative basis for management research.

“ Without the historic switch to remote working, the economic impact of the pandemic would have been far worse and social distancing far more difficult. Working from home is a not only economically essential, it is a critical weapon in our fight against Covid-19.

Figure 1: Working from home US daily news coverage increased 120 fold in March 2020



Source: Newsbank Access World News collection of approximately 2,000 national and local daily US newspapers. Shows the % of articles mentioning "working from home" or "WFH". Daily data plotted as a weekly average. Data until January 2020.

*Mitch McConnell broke his shoulder falling in his garden and Rand Paul had an operation on his lung following an incident when a neighbor "tackled him".

As the world entered lockdown earlier this year, Covid-19 swung a wrecking ball through traditional working patterns. Attitudes and ideas have equally been overturned: working from home is increasingly viewed as both normal and acceptable. If you haven't experienced the phenomenon directly, you've probably heard about it, as US newspapers' coverage of the subject jumped an incredible 12,000% since January (see Figure 1). The office is not dead but there will be no return to the pre-Covid era.

The trend toward working from home is nothing new. In 2014 I published a study of a Chinese travel company, Ctrip, that looked at the benefits of its working-from-home policies (Bloom et al., 2014). And in recent months as the pandemic has forced millions of workers to set up home offices, I have been advising dozens of firms and analyzing four large surveys covering working from home.

The US is now a working-from-home economy

My colleagues and I surveyed the work status of 2,500 Americans from May 21-25 (see Figure 2). The participants were all aged 20 to 64, worked full-time in 2019, and earned more than \$20,000. The study was weighted to represent the US by state, industry, and income.

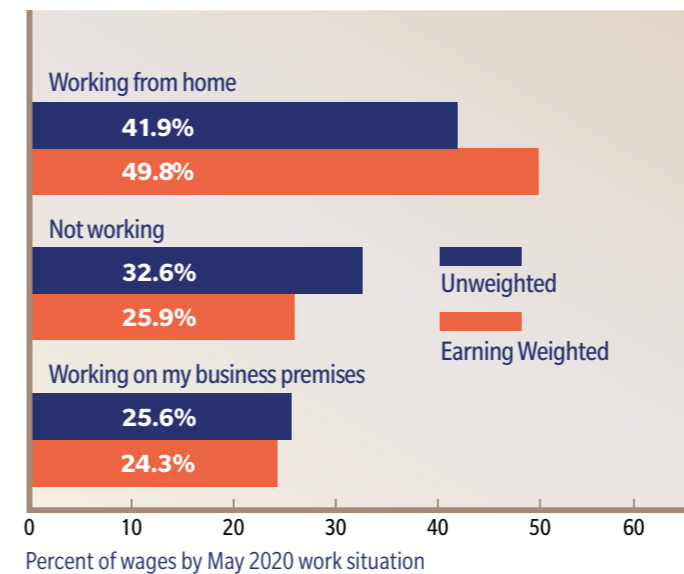


We find that 42% of the US labor force are now working from home full time, while 33% are not working - a testament to the savage impact of the lockdown recession. The remaining 26% are working on their business's premises, mostly as essential service workers: almost twice as many employees are working from home.

If we weight these employees by their earnings in 2019, an indicator of their contribution to US GDP, these remote workers now account for more than two-thirds of economic activity.

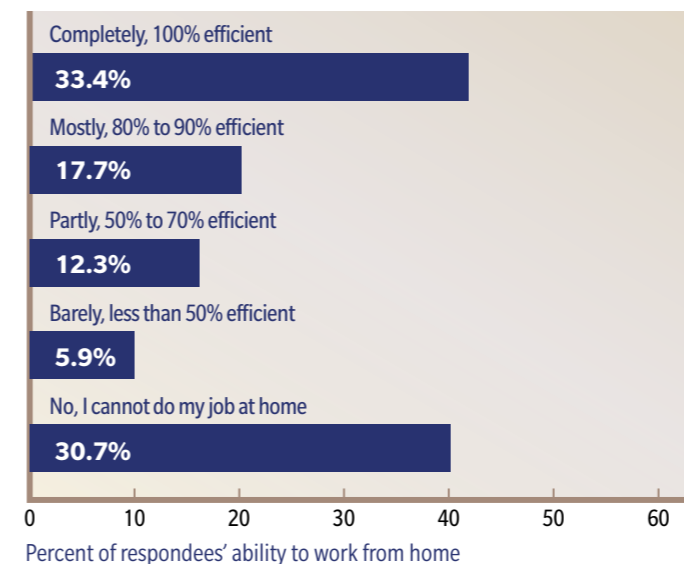
Without this historic switch to remote working, the economic impact would have been far worse and social distancing far more difficult. Working from home is a not only economically essential, it is a critical weapon in our fight against Covid-19.

Figure 2: Working from home now accounts for over 60% of US economic activity



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).

Figure 3: Not all jobs can be carried out working from home



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.

“ Today, as policymakers consider how to focus stimulus spending to revive growth, a significant increase in broadband spending is crucial to ensuring that all of the United States has a fair chance to bounce back from Covid-19.

The inequality time bomb

Not everyone can work remotely (see Figure 3). Only 51% of those in our survey reported being able to work from home at an efficiency rate of 80% or more. Managers, professionals and financial workers can easily carry out their jobs by video conference, phone and email. The other half of Americans - including many employees in retail, healthcare, transport, and business services - are not so lucky. Their jobs require interacting physically with customers or working with products or equipment outside the home, so they face a nasty choice between enduring greater health risks at work or forgoing earnings and experience by staying at home.

Many Americans also lack the facilities to effectively work from home (see Figure 4). Only 49% report being able to work privately in a room which is not their bedroom. Internet access is another big challenge. Only two-thirds of Americans say they have a connection that works more than 90% of the time - a minimum requirement for video calls. The remaining third have such poor internet connectivity that it prevents them effectively working from home.

Better educated, higher-earning employees are far more likely to work from home (see Figure 5). These employees continue to earn, develop skills and advance their careers. Those unable to work from home - either because of the nature of their jobs, or because they lack suitable space or internet connections - are being left behind. They face bleak prospects if their skills erode during the shutdown.

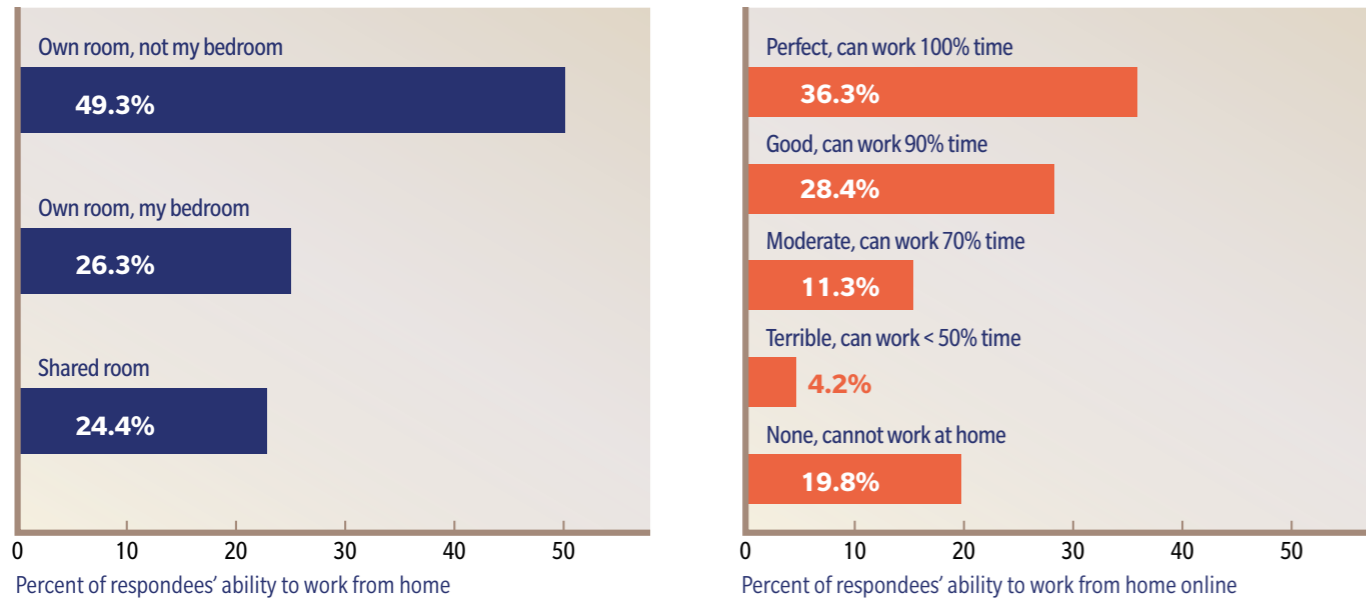
Taken together, these findings point to a ticking inequality time bomb.

So as we move forward to restart the US economy, investing in broadband expansion should be a major priority. During the last Great Depression, the US government launched one of the great infrastructure projects in American history when it approved the Rural Electrification Act in 1936. Over the following 25 years,

access to electricity for rural Americans increased from just 10% to nearly 100%. The long-term benefits included higher rates of growth in employment, population, income, and property values.

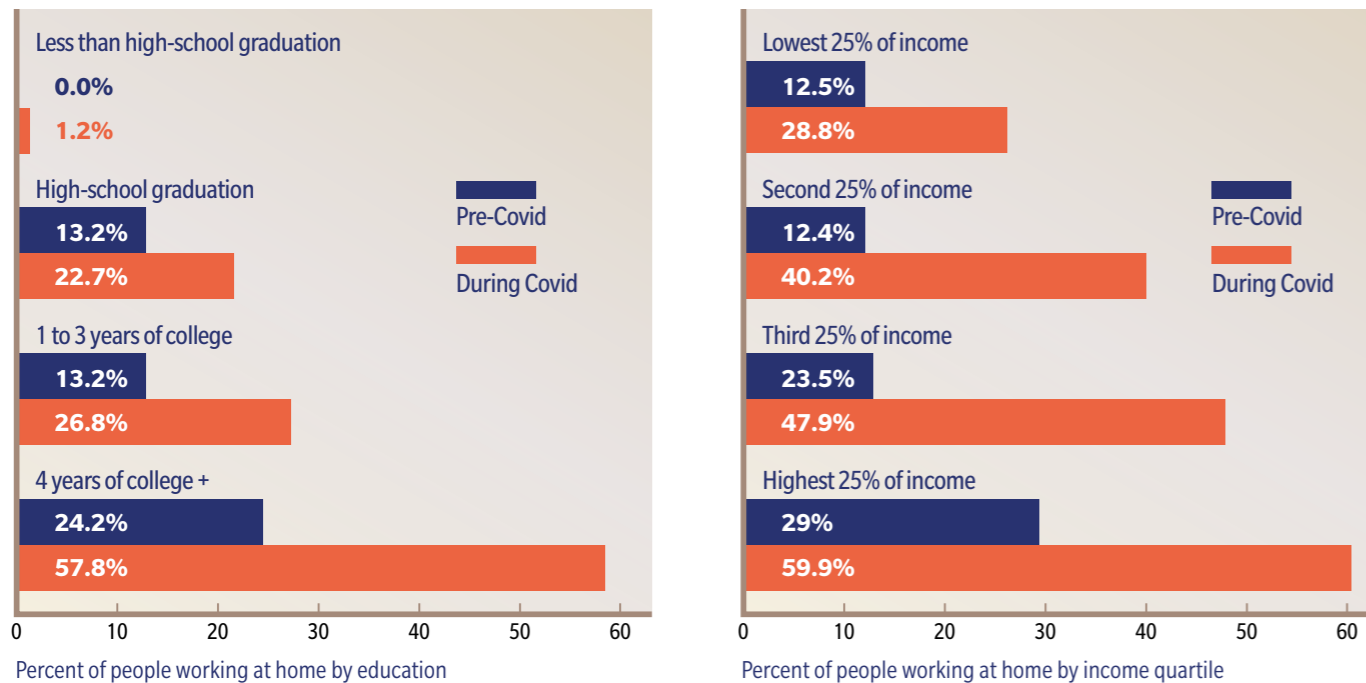
Today, as policymakers consider how to focus stimulus spending to revive growth, a significant increase in broadband spending is crucial to ensuring that all of the United States has a fair chance to bounce back from Covid-19.

Figure 4: Working from home under Covid is challenging for many employees



Source: Pre-COVID data from the BLS ATUS <https://www.bls.gov/news.release/flex2.htm>. During COVID 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.

Figure 5: Working from home is much more common among educated higher income employees



Source: Pre-COVID data from the BLS ATUS <https://www.bls.gov/news.release/flex2.htm>. During COVID 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. We code a respondent as working from home pre-COVID if they report working from home one day per week or more.

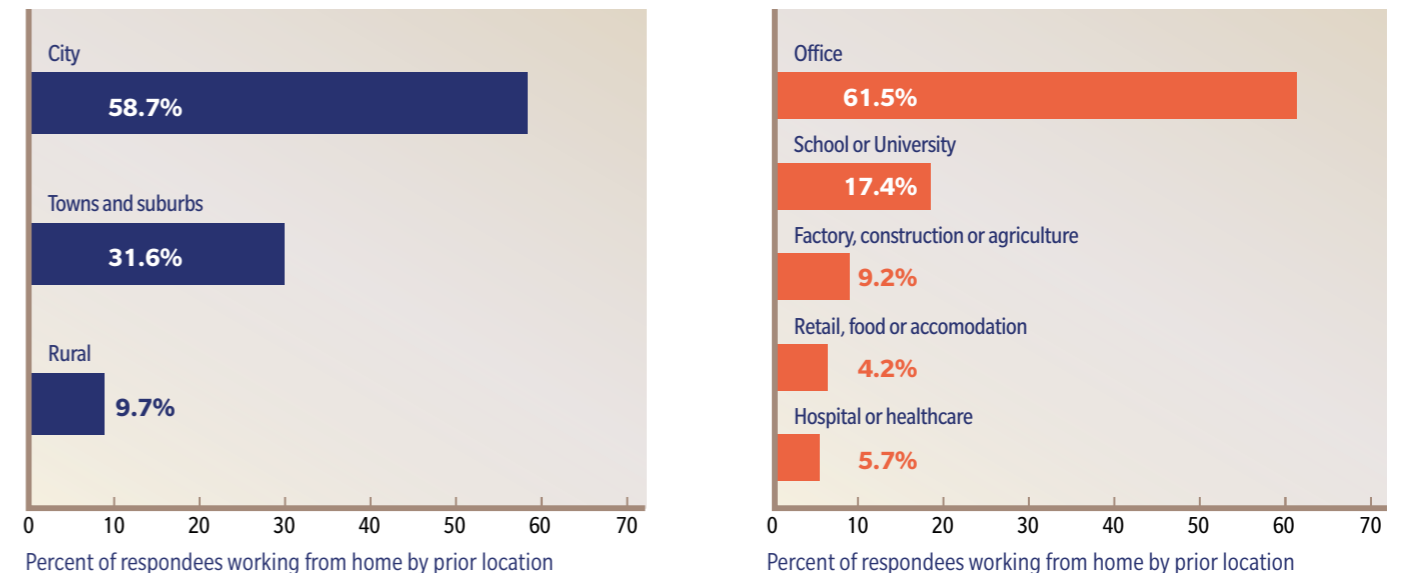
“Even though firms plan to reduce the time employees spend at work, this will not reduce the demand for total office space. To accommodate social distancing, firms are typically thinking about halving the density of offices. So the expected 15% drop in days at the office will be more than offset by a 50% increase in demand for space per employee.”

The golden age of city centers is over

The overwhelming majority of today's remote workers were previously working in offices in city centers (see Figure 6). Since these employees also tend to be well paid, I estimate that this has had a hugely depressing impact on the vitality of city centers by removing more than 50% of total daily spending on bars, restaurants and shops. As I argue below, this upsurge in remote working is largely here to stay. So I see a longer-run decline in city centers.

The largest American cities have seen incredible growth since the 1980s, as younger, educated Americans have flocked into revitalized downtowns. But it looks like 2020 will reverse that trend, with a flight of economic activity from city centers. The upside will be a boom for suburbs and rural areas.

Figure 6: Employees working from home come mainly from offices in cities



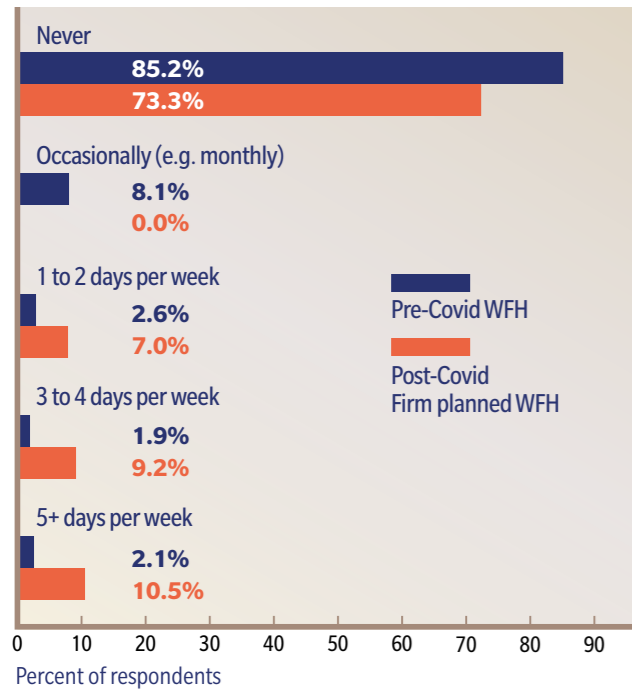
Source: Data from a survey of 2,500 US residents aged 20 to 64, earning more than \$20,000 per year in 2019 carried out between May 21-25 2020, by QuestionPro on behalf of Stanford University. Sample reweighted to match the Current Population Survey.

Working from home is here to stay

Working from home is a play in three unique parts. The first is pre-COVID: an era in which remote working was both rare and stigmatized. A 2017-18 survey of 10,000 salaried workers by the Bureau of Labor Statistics shows only 15% of employees ever had a full day working from home, with the majority (8%) of these doing so only occasionally (see Figure 7). Just 2% of workers ever worked from home full time. From talking to hundreds of remote workers over the years, I found these are mostly either lower-skilled data-entry or tele-sales workers, or those in higher-skilled jobs who were able to continue working remotely despite moving to a new area.

Working from home before the pandemic was often mocked as “shirking from home”, or “working remotely, remotely working”. In my 2017 *TedX Talk* I showed how an image search on the words “Working from Home” pulled up hundreds of negative images of cartoons, semi-naked people, or parents holding a laptop in one hand and a baby in the other.

Figure 7: Before Covid 5% of working days were spent at home, currently 40% of working days are at home, and post-Covid firms predict this will end up at 20% of working days



Source: Pre-COVID WFH data from the Bureau of Labor Statistics American Time Use Survey 2017-2018 module, run on 10,000 American wage and salary workers (excluding self-employed) <https://www.bls.gov/news.release/flex2.htm>

Post COVID WFH data from the survey of Business Uncertainty from the Atlanta Federal Reserve Bank, Chicago University and Stanford University. Panel of around 1,000 firms. See <https://www.frbatlanta.org/blogs/macroblog>

Working from home during the pandemic is very different. It is now extremely common, operating without the stigma but under *challenging conditions*. Many workers have children at home and struggle to find quiet space. They may have had no choice about working from home, or the need to do so full time. So Covid has forced us to work from home under the worst circumstances.

But post-Covid, remote working should be an opportunity to look forward to. For the dozens of firms I have talked to, the typical plan is that employees will work from home for 1-3 days a week, and come into the office the rest of the time. This is supported by our evidence on about 1,000 firms from the *Survey of Business Uncertainty* I run with the Atlanta Fed and the University of Chicago.

Before Covid, 5% of working days were spent at home. During the pandemic, remote working days increased eightfold to 40%. Post-Covid, even though this figure is expected to fall to 20%, it still represents a fourfold increase on the pre-Covid level, highlighting that working from home is here to stay. While few firms plan to continue full-time remote working after the pandemic, nearly every firm I have talked to about this has been positively surprised by how well it has worked.

The office will survive, but in a different form

“Should we get rid of our office?” is a question I’m often asked. My answer is: “No, but you might want to move it.”

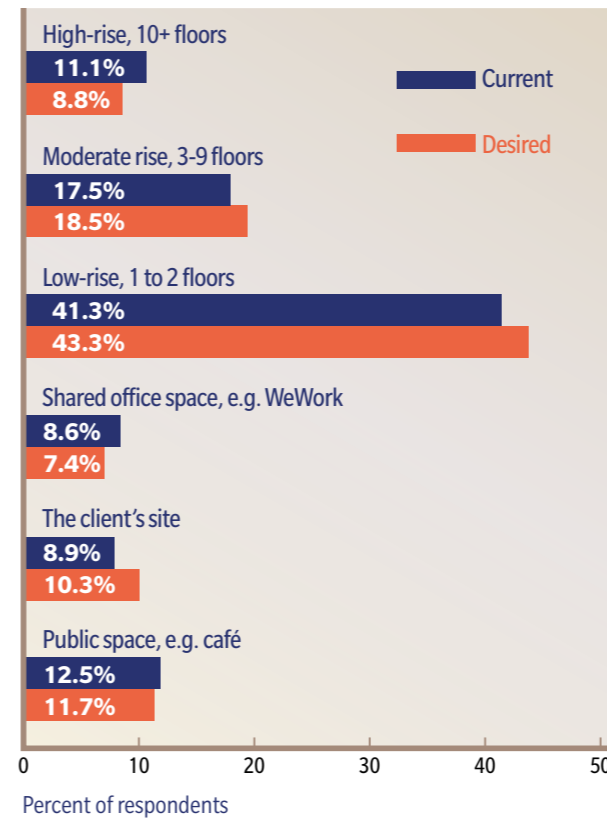
Even though firms plan to reduce the time their employees spend at work, this will not reduce the demand for total office space. To accommodate the need for social distancing, the firms I talk to are typically thinking about halving the density of offices. So the expected 15% drop in working days at the office will be more than offset by a 50% increase in demand for space per employee.

Rather than closing down, offices are moving from skyscrapers to industrial parks. The shift of office space into high-rise buildings in city centers has been a dominant theme of the past 40 years in American cities. Covid is dramatically reversing this trend as high rises face two massive new problems. First, mass transit - the subway, trains and buses. How can you get several million workers in and out of cities like New York, London or Tokyo every day with social distancing? Second, elevators. If we strictly enforce six feet (1.8m) of social distancing, the maximum capacity of elevators could fall by 90%, making it impossible for employees working in a skyscraper to expediently reach their desks.

If social distancing disappears post-Covid, this may not matter. But my guess is that when a vaccine eventually comes out in a year or so, society will have become accustomed to social distancing. Given recent near-miss pandemics like SARS, Ebola, MERS and avian flu, many firms and employees will be braced for a return to social distancing in the near future and may be reluctant to return to dense offices. Employees in our survey report a 25% drop in demand to work in offices after Covid (see Figure 8).

So what is the solution? I predict many firms will move out to suburban industrial park offices, or “campuses”, as tech companies in Silicon Valley like to call them. These have the two huge benefits of ample parking for all employees, and spacious low-rise buildings that are accessible by stairs.

Figure 8: Employees demand for high-rise buildings is 25% lower post-Covid



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 the Current Population Survey.



“The best advice is to work from home about 1-3 days a week. At-home days can be reserved for quiet, thoughtful work; in-office days for meetings and collaborations. This would improve employees’ performance, while saving commuting time, stress and money - all of which is great for firms, employees and the environment.”

Home truths

From all my conversations and research, three key lessons have repeatedly emerged.

First, working from home should be part time.

Full-time remote working is problematic for firms for three reasons: It is hard to be creative at a distance, it is hard to be inspired and motivated at home, and employee loyalty is strained without social interaction. *My experiment at Ctrip in China* followed 250 employees working from home for four days a week for nine months and saw the challenges of isolation and loneliness this created. For the first three months employees were happy - it was the euphoric honeymoon period. But by the time the experiment has run its full length, two-thirds of the employees requested to return to the office: they needed human company. Currently, we are in a similar honeymoon phase of full-time working from home. But as with any relationship, things can get rocky and I see increasing numbers of firms and employees turning against this practice.

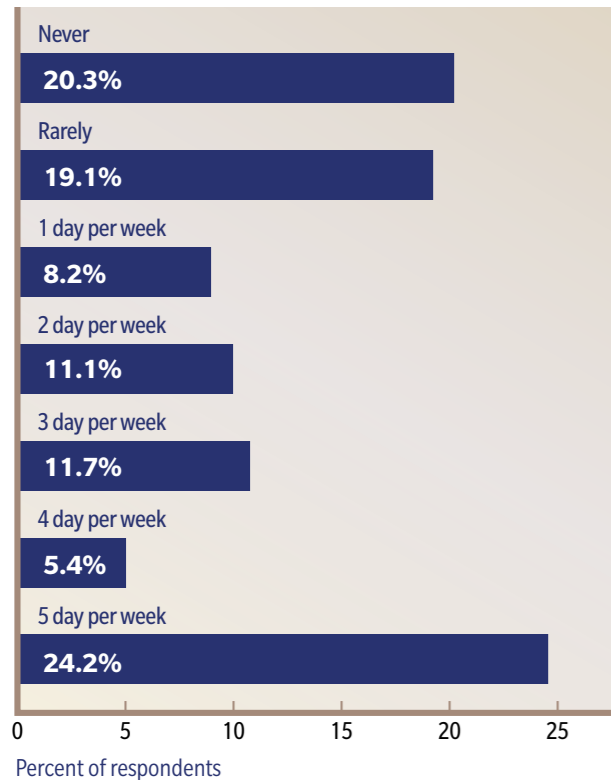
So the best advice is plan to work from home about 1-3 days a week. At-home days can be reserved for quiet, thoughtful work; in-office days for meetings and collaborations. This would improve employees’ performance, while saving them a huge amount of commuting time, stress and money, all of which is great for firms, employees and the environment.

Second, working from home should be optional.

In our survey of 2,500 American workers, the median participant wants to work from home for two days a week, but there is a striking range of views (see Figure 9). A full 20% of workers never want to work from home while another 25% want to do so full time. The remaining 55% all want some mix of office and home time. I saw similarly large variation in views in my China experiment, which often changed over time. Employees would try remote working then discover after a few months it was too lonely, or fell victim to one of the three enemies of at-home workers - the fridge, the bed and the television - and decide to return to the office.

“Choice is key - let employees pick their schedules and let them change as their views evolve. There are two exceptions: new hires, for whom maybe one or two years full time in the office makes sense; and under-performers.”

Figure 9: There is substantial demand for WFH post-Covid



Source: 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.

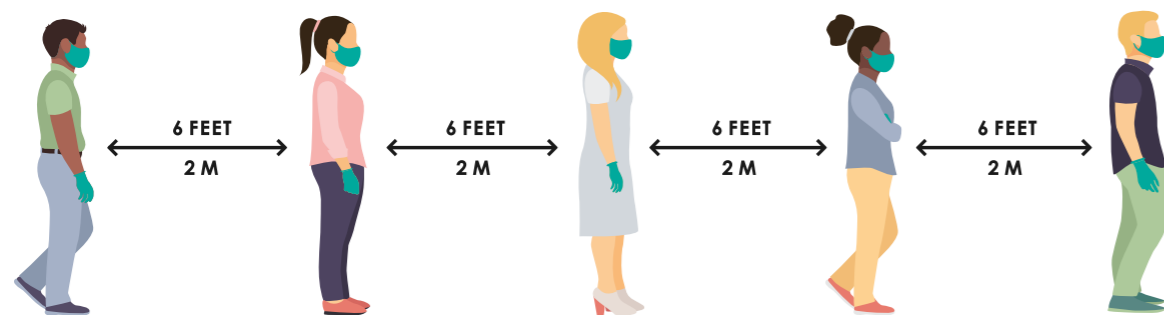
So the simple advice is let employees choose, within limits. Nobody should be forced to work from home full time, and nobody should be forced to work in the office full time. Choice is key - let employees pick their schedules and let them change as their views evolve. There are two exceptions: new hires, for whom maybe one or two years full time in the office makes sense; and under-performers, who are the subject of my final tip.

Third, working from home is a privilege, not an entitlement.

For remote working to succeed, it is essential to have an effective performance review system. If you can evaluate employees based on output - what they achieve - they can easily work from home. If they are effective and productive, great; if not, warn them; and if they continue to underperform, haul them back to the office. This approach requires effective performance management. In firms which do not have effective employee appraisal systems management, I would caution against WFH. This was the lesson of *Yahoo in 2013*. When Marissa Meyer took over, she found there was no effective employee evaluation system, so working from home was paused while she revamped performance review mechanisms.

The Covid-19 pandemic has challenged and changed our relationships with work. There's no real going back, and that means policymakers and business leaders need to plan and prepare so workers and firms are not sidelined by otherwise avoidable problems.

With a thoughtful approach to a post-pandemic world, working from home can be a change for good.



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KEY TAKEAWAYS

- ➔ 42% of US workers are now working from home full time, accounting for more than two-thirds of economic activity.
- ➔ Policymakers should expand broadband services to ensure more workers can do their jobs away from a traditional office.
- ➔ As companies consider relocating from densely populated urban centers in the wake of the Covid-19 crisis, cities may suffer while suburbs and rural areas benefit.
- ➔ Post-pandemic, working from home will be optimal at about two days a week.

FIND OUT MORE

- Nick Bloom's TEDx talk "Go Ahead, Tell Your Boss You Are Working From Home" (Stanford 2017).
- Bloom N., Liang J., Roberts J., Zhichun J.Y. (November 2014). "Does Working from Home Work? Evidence from a Chinese Experiment". Quarterly Journal of Economics.
- Glaeser E. (2011). "Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier and Happier". Penguin Books.



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