

Telecommuting after Covid-19: Economic and Other Implications

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Telecommuting will change the nature and location of work



TheUpshot

Is the Five-Day Office Week Over?

The pandemic has shown employees and employers alike that there's value in working from home — at least, some of the time.



A Better, Cheaper Apartment for Renters Who Stay in New York

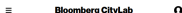
After exodus of tenants from Manhattan in recent months, many die-hard New Yorkers have seized on the soft rental market to upgrade



The future of work

Is the office finished?

The fight over the future of the workplace



CITYLAB

Paying Remote Workers to Relocate Gets a Pandemic-Era Boost

As jobs go remote due to coronavirus, several cities are doubling down on incentive programs to lure tech workers to work from home in a new location.

By Sarah Iltis
June 23, 2020, 12:38 PM PDT



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- 37% jobs can be done entirely at home (Dingel & Neiman, 2020)
- 31% work can be done entirely at home (Mas and Pallais, 2020)
- 35% switched to remote work due to Covid-19 (Brynjolfsson et al, 2020)

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- 35% switched to remote work due to Covid-19 (Brynjolfsson et al, 2020)
- **17-23%** work will be done at home after Covid-19 (Barreiro, Bloom, and Davis, 2020)

More telecommuting will lead to migration

- Some employers (e.g., Facebook and Twitter) announced that many of their employees can work from home forever
- [Upwork survey](#), Oct 2020:
 - ▶ 2% already moved because of being able to work from home
 - ▶ 6% planned a move, 2/5 of them would move more than 4 hours away from their current location
- [Morning Consult survey](#), Jun 2020:
 - ▶ 28% would move if given a permanent WFH option

▶ Back

Research Goals

Understand effects of more telework on

- population and employment in different places
- real estate prices
- individual incomes
- commuting patterns and traffic
- public well-being

Our Research

Two studies:

- Delventhal, M. J., E. Kwon, and A. Parkhomenko (2020):
“How Do Cities Change When We Work from Home?”
 - ▶ focuses on Greater Los Angeles (L.A., Orange, San Bernardino, Riverside, and Ventura counties)
- Delventhal, M. J. and A. Parkhomenko (2020):
“Spatial Implications of Telecommuting”
 - ▶ makes numerous extensions to the previous paper and focuses on the entire United States

Informal summary:

- Parkhomenko, A. (2020): “How remote working in the post-COVID-19 era could transform L.A. and other cities” LA Times

Research Approach

- Quantitative spatial equilibrium model with workers, firms, and real estate developers
 - ▶ **workers:** choose where to live and where to work; take into account wages, housing costs, local amenities, and commuting costs
 - ▶ **firms:** choose where to offer jobs; take into account wages and office rents
 - ▶ **developers:** choose how much housing and office space to build; take into account supply constraints (e.g., land use regulation) and demand
 - ▶ **telecommuting:** workers differ in how often they have to commute to work vs. work from home
- We use lots of detailed spatial data to ensure that our model economy is similar to the economy of L.A. or the U.S.

Research Results

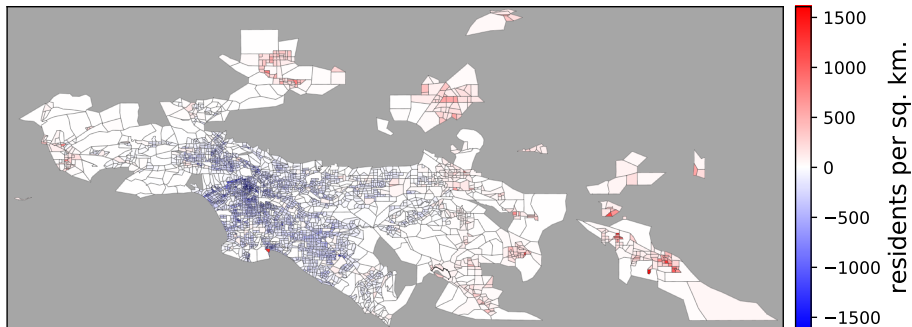
- Simulate an increase in WFH
 - ▶ this affects optimal choices of workers, firms, and developers

Research Results

- Simulate an increase in working from home
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 - ▶ **workers:** overall migration to less dense areas, but those who still need to commute move to central areas

Research Results

Changes in population density

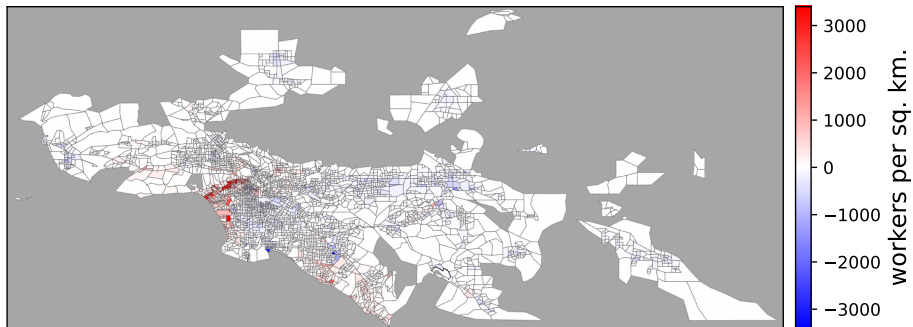


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Changes in job density

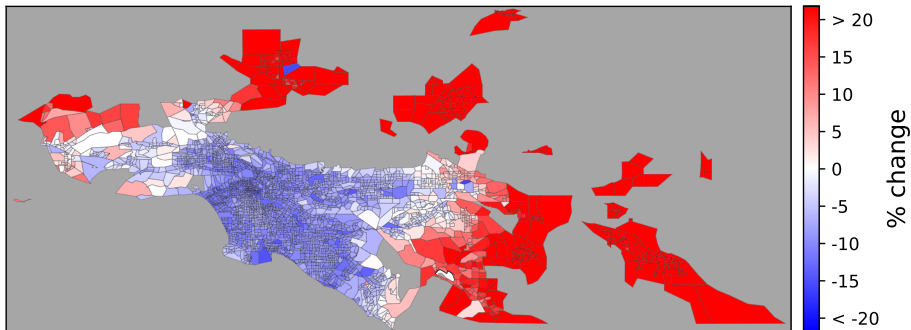


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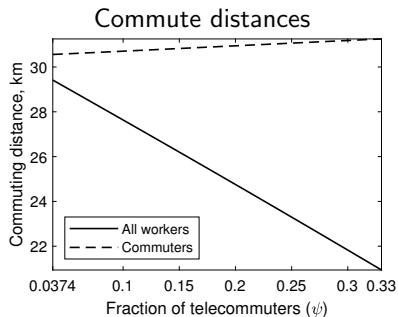
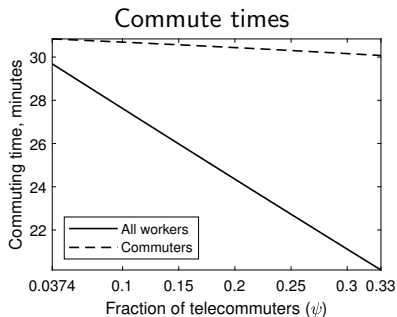
Changes in real estate prices (both commercial and residential)



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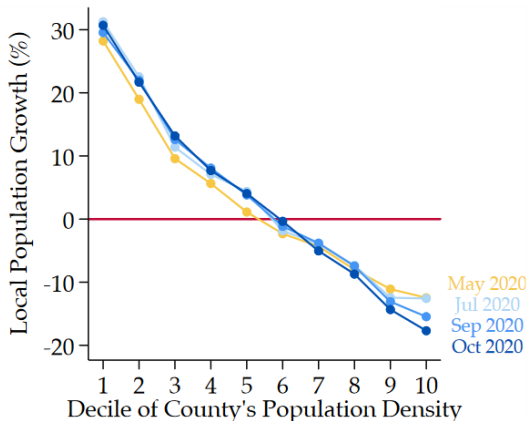
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 - ▶ **possible economic downsides:** remote work may lead to productivity losses, especially in sectors where teamwork and networking are crucial

Predictions of our model are coming true

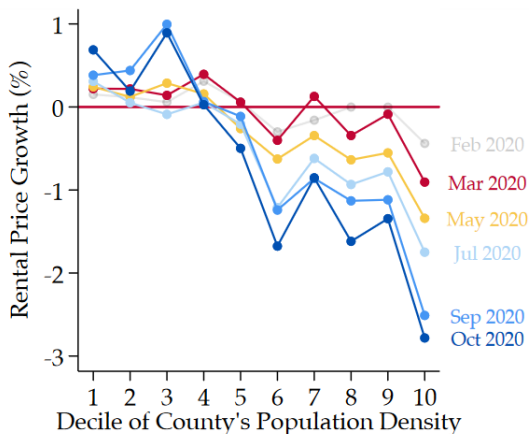
Residents moved from more dense to less dense counties



Source: [Althoff, Eckert, Ganapati, and Walsh \(2020\)](#)

Predictions of our model are coming true

Rents increased in less dense cities and fell in more dense counties

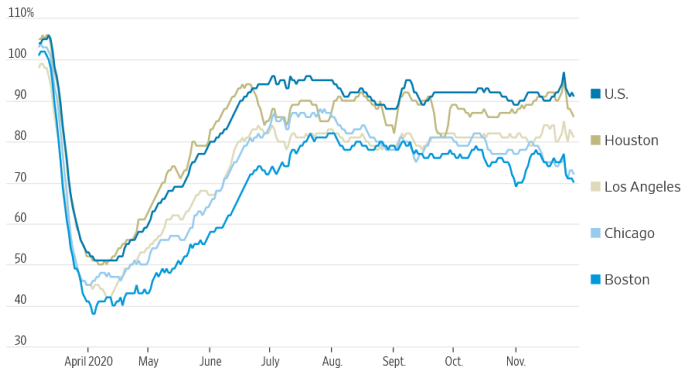


Source: [Althoff, Eckert, Ganapati, and Walsh \(2020\)](#)

Predictions of our model are coming true

Traffic eased in most large urban areas

Change in passenger vehicle miles traveled from March 1, seven-day rolling average



Source: Inrix

Source: [Wall Street Journal](#), Jan 2021

Other implications of more common work from home

If more people in L.A. work from home full or part time, what will be the implications for

- Public health?
- Homelessness?

Public health

Some positives

- WFH leads to better sleep patterns ([Conroy et al, 2020](#))
- WFH is associated with higher life satisfaction ([Bloom, Liang, Roberts, and Ying, 2015](#))
- Long commutes reduce health ([Kunn-Nelen, 2015](#))
- 11% of time saved on commuting during Covid-19 was spent on outdoor leisure and exercise ([Barreiro, Bloom, and Davis, 2020](#))

Some negatives

- WFH is associated with higher stress levels in individuals with children ([Song and Gao, 2019](#))
- WFH may lead to loneliness and increased depression ([Killgore, Cloonan, Taylor, and Dailey, 2020](#))

A word of caution

- Many studies on health implications of remote work were conducted prior to Covid-19
- Covid-19 changed attitudes to remote work ([Barreiro, Bloom, and Davis, 2020](#)) and some previous findings may be invalid

Other considerations and possible side effects

- The ability to WFH is greater among those with higher income and education and they also tend to have better health
- Greater WFH will lead to more urban sprawl:
 - ▶ less walking/biking and more driving → bad for health
 - ▶ less/more pollution → good/bad for health

Homelessness

- High housing costs contribute to homelessness ([Cohen, 2020](#)) and a reduction in rents may help
- But WFH largely benefits those with higher income and education and, as we find in our 2nd study, may lead to more income inequality
- Moreover, as some upper class remote workers leave for the suburbs or other cities, low-skilled service jobs in the city may be lost
- Overall impact on homelessness is ambiguous and requires further investigation

Thank you!