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Title

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Publication Date

2025

DOI

10.7922/G22N50NW

Assessing the Shift to Remote and Hybrid Work in California throughout the COVID-19 Pandemic

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January 2025

Issue

Beginning in 2020, many in-person activities were replaced by virtual activities as a response to the COVID-19 pandemic. This affected fundamental elements of transportation systems such as trip frequency, commute distance, origins, and destinations. For example, remote work and study were widely adopted among workers and students. Still, the ways that the pandemic affected individuals' work arrangements across different phases of the pandemic and the extent to which full remote work and hybrid work induced by the pandemic might persist in the future are unclear. In addition, recent studies are not conclusive regarding the

ways changes in work arrangements do/will impact travel patterns and trip making.

To better understand these trends, we administered surveys to US residents in spring 2020, fall 2020, summer 2021, and fall 2023 to capture activity and travel patterns before, during, and after the pandemic. Respondents shared sociodemographic characteristics, attitudes, work- and education-related activities, shopping patterns, travel choices, vehicle ownership, the use of emerging transportation options, and other information. This brief

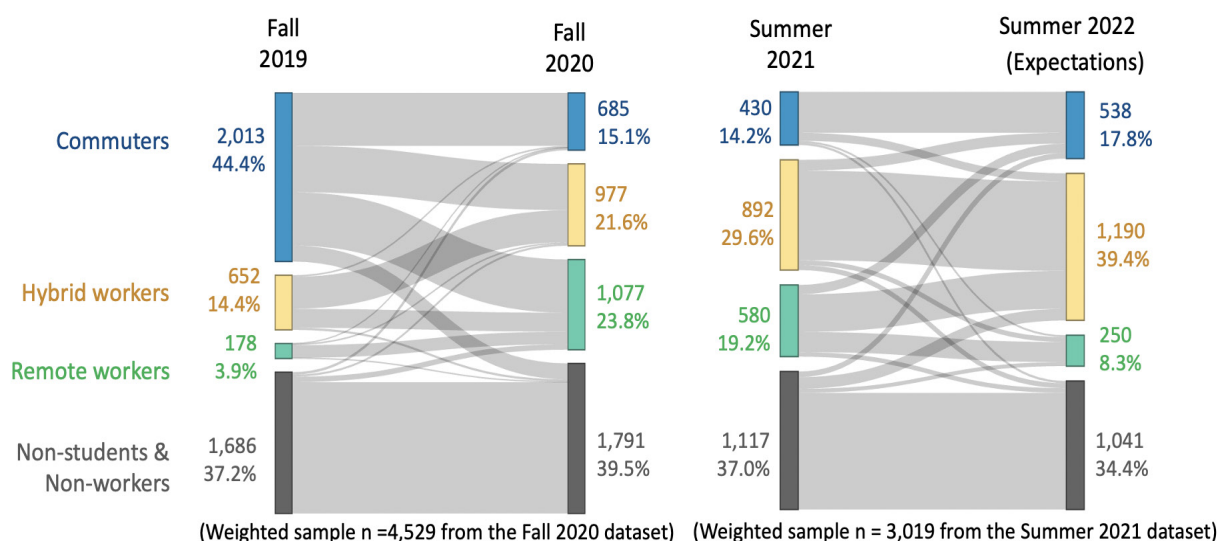


Figure 1. Transitions in work-related travel arrangements in Southern California

Note: Respondents lived in the Southern California Association of Governments region at the time of survey participation.

presents insights and policy recommendations derived from a portion of the study focusing on changes in work arrangements, using repeated cross-sectional data collected in Southern California in fall 2020 and summer 2021.

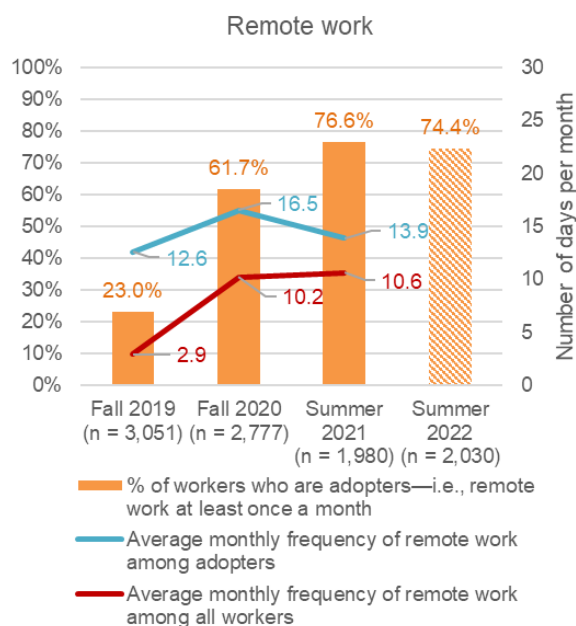
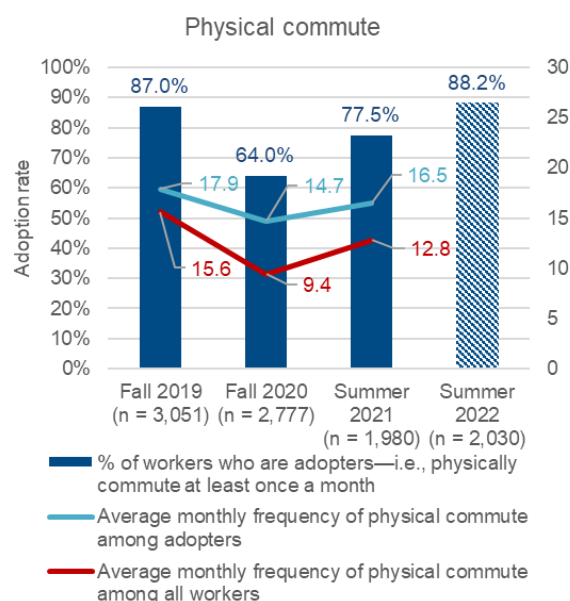


Figure 2. Shifts in workers' commuting (left) and remote work (right) patterns

Note: The hatched bars indicate the percentage of workers in summer 2021 who expected a given outcome in summer 2022.

Key Research Findings

Workers and students report a shift to remote and hybrid work. Prior to the pandemic, Commuters were the largest group comprising 44.4% of all respondents (i.e., 70.8% of all students and workers) in the weighted sample. Due to stay-at-home policies, the number of commuters dramatically decreased to 15.1% by fall 2020. The largest share of Commuters—39.3% of students and workers—transitioned to remote work while 35.7% reported they had become Hybrid Workers (Figure 1).

By summer 2021, the portion of respondents in the weighted sample describing themselves as Remote Workers fell to 19.2%, or 30.5% of students and workers, as many businesses resumed in-person work. Meanwhile, 29.6% of respondents (an increase of 8% from fall 2020), or 46.9% of students and workers, had hybrid work schedules. By summer 2022, 39.4% of respondents, or 60.2% of students and workers, expected to have hybrid work arrangements. This shift was primarily driven by Remote Workers gradually returning to their workplace.

There were contrasting trends in remote work and physical commutes during the pandemic. There was a sharp decline in the proportion of workers commuting at least once a month from 87% in fall 2019 to 64% in fall 2020 (Figure 2). Although this percentage increased to 77.5% by summer 2021, it remained approximately 10 percentage points below pre-pandemic levels. By summer 2022, this percentage was expected to increase to 88.2% of workers. Similar trends were observed in commuting frequency, with a drop from 17.9 to 14.7 days per month among commuters in fall 2020, and a slight increase to 16.5 days by summer 2021. This was still 8% below pre-pandemic levels.

In contrast to physical commuting, the percentage of individuals working remotely at least once a month substantially increased from 23.0% pre-pandemic to 61.7% in fall 2020 and remained high at 76.6% in summer 2021. A slight decline in the percentage engaging in remote work was expected in the future. The frequency of remote work increased during the early phase of the pandemic from an average of 12.6 to 16.5 days per month among those that participate in remote work (2.9 to 10.2 days per month

among all workers), and then declined in summer 2021 to 13.9 days per month among those who work remotely at least once a month. This highlights a transition from exclusive remote work during the peak of COVID-19 to hybrid work. Looking ahead, many individuals anticipate engaging in hybrid work arrangements.

Policy Implications

Remote and hybrid work arrangements are appealing to workers. If allowed, a sizeable share of workers would be interested in continuing hybrid work arrangements. Employers can consider adopting policies to allow flexible work arrangements to attract and retain talent and improve productivity. They can also explore policies, such as return-to-the-office or “anchor days”, to increase in-person interactions and work productivity in the office.

Reimagining business districts can renew city centers. Local governments can revitalize underutilized space and promote the livability of business districts and downtown areas, which may languish more people working remotely.

Transportation agencies must improve services to meet the needs of diverse groups. Agencies will need to adjust services for those who have transitioned to remote or hybrid forms of work while ensuring that those who continue to physically commute have access to safe and efficient travel choices.

Changes in commute patterns may require adaptive traffic management. Traffic has shifted from longstanding peak hours to former non-peak hours or even to “redefined” peak hours. Midday peak traffic lasts longer now than it did before 2020. To address this, transportation agencies should reduce the conventional emphasis on peak-hour traffic management and should study solutions to better use transportation capacity throughout the entire day.

Public transit agencies can adjust to emerging needs with scheduling and on-demand services. Schedule changes can capture demand for non-work travel, address shifts in peak and non-peak demand, and balance regional and local services. Planners may consider combining fixed-route fixed-schedule transit services with flexible, on-demand services to better meet the needs of potential riders who are traditionally difficult to serve.

More Information

This policy brief is drawn from a peer-reviewed journal paper: logansen, X., Malik, J., Lee, Y., & Circella, G. (2024). Change in Work Arrangement during the COVID-19 Pandemic: A Large Shift to Remote Work and Hybrid Work. *Transportation Research Interdisciplinary Perspectives*, 25, 100969. <https://doi.org/10.1016/j.trip.2023.100969>

For more information about the findings presented in this brief, contact Giovanni Circella at gcircella@ucdavis.edu.

Research presented in this policy brief was made possible through funding received by the University of California Institute of Transportation Studies (UC ITS) from the State of California through the Public Transportation Account and the Road Repair and Accountability Act of 2017 (Senate Bill 1). The UC ITS is a network of faculty, research and administrative staff, and students dedicated to advancing the state of the art in transportation engineering, planning, and policy for the people of California. Established by the Legislature in 1947, the UC ITS has branches at UC Berkeley, UC Davis, UC Irvine, and UCLA. Funding to support this research was provided through a combination of grants from the Southern California Association of Governments (SCAG) [award number: 21-024-C01], the California Air Resources Board [award number: 19STC006], and the UC Institute of Transportation Studies. Additional funding was provided by the California Department of Transportation [award number: 65A0686] and the 3 Revolutions Future Mobility (3RFM) Program of the University of California, Davis.

Project ID UC-ITS-2021-05 | DOI: 10.7922/G22N50NW