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Authors

Paul, Julene
Taylor, Brian D

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Shifting transit use in COVID-19 pandemic and its implications for transit's recovery

Julene Paul, Graduate Student Researcher, UCLA Institute of Transportation Studies
Brian D. Taylor, Professor of Urban Planning and Public Policy, UCLA Luskin School of Public Affairs; Director, UCLA Institute of Transportation Studies

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Issue

During the first year of the COVID-19 pandemic, public health and transit agency officials recommended that people drastically curtail their interactions with others to slow the spread of illness. On public transit, where strangers congregate on large vehicles and travel together, the decline in riders was especially dramatic. While walking, biking, and driving, which enable social distancing, substantially recovered in 2021 to pre-pandemic levels, transit use remained – and remains – depressed.

But transit use neither fell nor recovered uniformly over the course of the pandemic. While ridership declined in most places, it did so unevenly across neighborhoods and users. Our research suggests that in the early part of the pandemic, transit use declined more dramatically among higher-income people, who were more likely than lower-wage workers to work from home. Because people who owned automobiles could travel about without coming in close contact with strangers, and because vehicle access is positively related to income, those who rode transit early in the pandemic were more likely to be low-income, Black, Hispanic, and immigrants than pre-pandemic transit riders.

With many workers still working from home, at least part-time, it is not clear when – or whether – transit trips into and out of major office centers will recover to their former levels. If that is the case, transit demand and service will likely continue to center around lower-income neighborhoods.

Key Findings

- While pre-pandemic bus transit riders were disproportionately people of color, low-income, and living in households without cars, these differences between bus riders and non-transit users likely grew even starker during the COVID-19 pandemic.
- Differences in bus ridership losses and recovery among Boston, Houston, and Los Angeles bus riders partly reflect the different services the agencies provide and markets they serve. For example, while Boston saw the largest pandemic declines, this partly reflects the fact that its transit agency serves a wealthier, whiter, and more central-city ridership base.
- Across all three regions, neighborhoods with more non-white residents saw smaller declines in bus ridership, even when controlling for socioeconomic factors like poverty rates and built environment factors like population density and metropolitan centrality.
- Neighborhoods with more alternatives to riding transit – in particular, higher rates of automobile ownership – saw greater patronage losses.
- The influence of the built environment, including population density and distance from downtown, varied across the three cities. For example, central Boston neighborhoods saw the greatest declines in bus ridership, while central neighborhoods in Los Angeles and Houston saw proportionally less

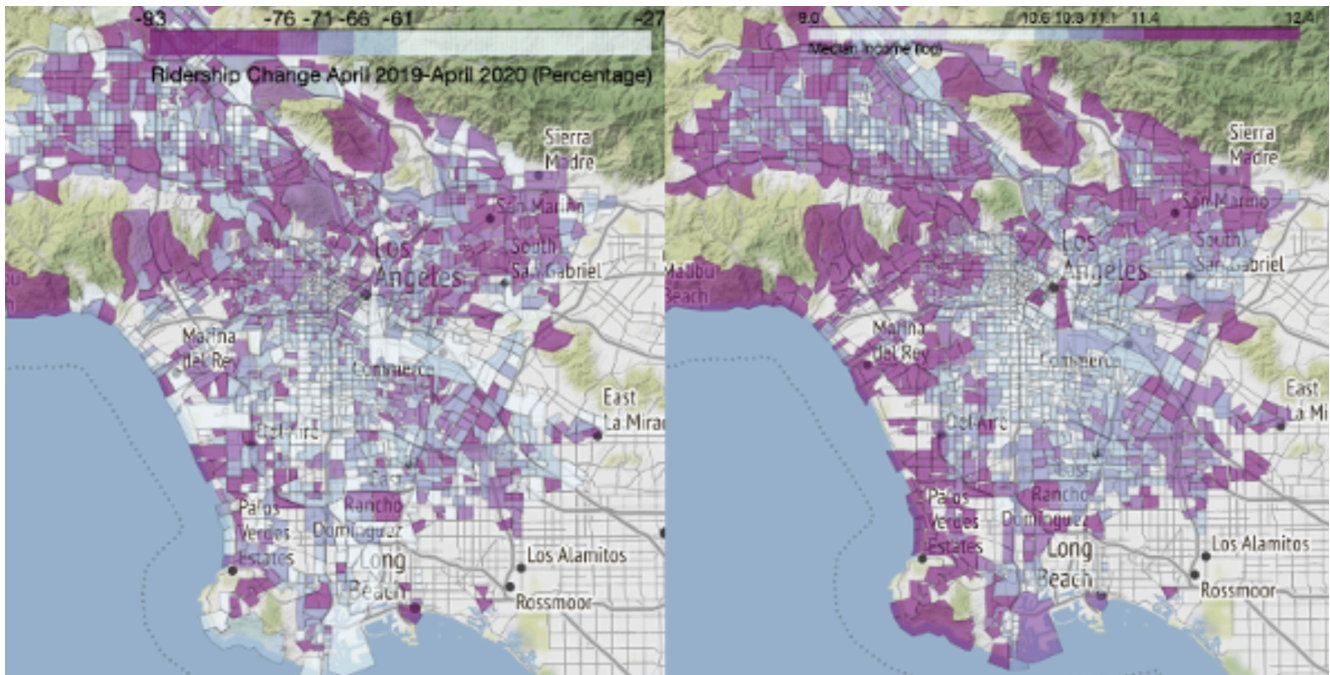


Figure 1. Shifting transit use in the pandemic was strongly correlated with neighborhood income
 Left: April 2019 to April 2020 ridership changes. Right: 2014-2018 median income. Los Angeles County

Recommendations

- Redeploy service to neighborhoods that need it most to reflect shifting patterns of demand, particularly to disadvantaged neighborhoods where demand is high and travel alternatives for many are meager.
- Prioritize capital investments that will effectively serve transit-reliant riders — such as local bus service and BRT lanes — over costly rail investments that attempt to draw downtown commuters out of their cars.
- Federal, state, and local transit subsidy programs should account for how regional differences in transit demand (for example, the lower-income and more sprawling consumer markets in Houston and Los Angeles versus Boston) affect the use of various transit services.

- Monitor trends in other travel behavior changes accelerated by the pandemic, including increased rates of work-from-home and e-commerce use, for their impacts on future transit demand.
- Better integrate public transit into the broader suite of travel options — including walking and bicycling, automobile travel, and new mobility options — to more effectively serve disadvantaged populations in the months and years ahead.

More Information

This policy brief is drawn from the article “Pandemic Transit: Examining Transit Use Changes and Equity Implications in Boston, Houston, and Los Angeles” in the journal *Transportation*. The article can be found at: <https://doi.org/10.1007/s11116-022-10345-1>.

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