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Did Extending Driver Licenses to Individuals Without Legal Presence Affect Transit Ridership in Orange County?

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Issue

Between 2014 and 2017, overall transit ridership in the U.S. declined by 6%, while bus transit ridership fell by 9.5%.¹ Some regional agencies such as the Orange County Transportation Authority (OCTA) were particularly affected. From 2012 to 2016, OCTA bus ridership dropped by almost 19% despite the launch of the Bravo! Program (i.e., limited-stop bus service) in 2013 and the OC Bus 360 program to improve bus service and efficiency in 2015. Changing socioeconomic conditions, service quality, and increased competition from transportation network companies (e.g., Uber, Lyft) are some of the reasons behind the observed decline in bus ridership. A policy change that may also have impacted bus ridership during this time is the implementation of California Assembly Bill 60 (AB 60), The Safe and Responsible Drivers Act of 2013. Starting in 2015, AB 60 directs the California Department of Motor Vehicles (DMV) to issue a driver's license to applicants who are unable to provide proof of legal presence in the United States but can provide satisfactory proof of identity as well as California residency.² Some of these individuals could have been relying on transit since they could not legally obtain a driver's license.

In this study, we examine if observed line-level changes in OCTA bus boardings could be partly attributed to AB 60, while controlling for differences in transit supply, socioeconomic variables, gas prices, and the built environment. Using fixed effects panel data models, we

analyzed monthly boardings on different OCTA route classifications—local³, community⁴, Express, and station link routes—one year before (2014) and two years after (2015 and 2016) AB 60's implementation.

Key Research Findings

After the implementation of AB 60, bus boardings decreased more than before. After controlling for transit attributes, changes in gas prices, and route-level unemployment and multifamily rent, bus boardings dropped more in 2015 and 2016 than in 2014. On local routes, bus boardings dropped by 2.3%, 5.8%, 8.3%, and 10.4% in the winter, spring, summer, and fall of 2015 and 2016 compared to 2014. Likewise, on community routes: bus boardings dropped by 1.1%, 4.7%, 1.9%, and 7.9% in the winter, spring, summer, and fall of 2015 and 2016 compared to 2014. On station link routes, bus boardings fell on average by 4.3%, 10.9%, 9.5%, and 3.9% in the winter, spring, summer, and fall of 2015 and 2016 compared to 2014. By contrast, we saw no such impact on express routes in 2015 and 2016 compared to 2014.

Route frequency did not matter in 2014-2016. For the range of route frequencies observed in 2014-16, monthly average route-level bus frequency did not impact bus boardings.

Rail vehicle revenue hours (VRH)⁵ and peak hour frequency had a significant impact on bus boardings

on local and community routes. Rail (i.e., train) VRH and the maximum number of trains operating at peak hours significantly influenced bus boardings on local and express routes. When the average rail VRH increased by 1%, the average monthly weekday bus boardings increased by 0.4% on community routes, which suggest that community routes complement the OC rail system. Similarly, a 1% increase in trains operating during peak hours negatively reduced weekday bus boardings on local and express routes on local and community boarding by 0.3%. This suggests that local and community bus lines compete with commuter trains in Orange County. Rail VRH and the number of trains operating during peak hours for the other routes are insignificant.

Gasoline prices also impacted bus boardings. During our study period, the impact of changes in gasoline prices on boardings was comparatively larger on local and express routes. A 1% increase in gas price increased the average monthly weekday bus boardings by 0.1% on local routes and 0.2% on community routes, controlling for other factors. We conjecture that local routes carry a higher percentage of marginalized populations and people with a lower annual household income and without private vehicles than

express routes. Therefore, we infer that people with cars are more sensitive to gasoline price increases.

Policy Implications

The long-term decline in transit ridership in OC is problematic in the context of California’s efforts to rein in vehicle miles traveled to reduce congestion, improve air quality, and achieve the state’s greenhouse gas emissions reduction targets. In addition to improving service (particularly frequency on selected routes) and expanding successful initiatives such as the Bravo! and the OC Bus 360 programs, OCTA may want to consider offering free transit pass programs financed using the insurance model.⁶

More Information

This policy brief is drawn from the report “What Explains Recent Trends in Orange County Transportation Authority Bus Ridership?” available at www.ucits.org/research-project/2018-28. For more information about findings presented in this brief, please contact Susan Handy at saphores@uci.edu.

¹American Public Transportation Association, Quarterly Ridership Reports: <https://www.apta.com/wp-content/uploads/APTA-Ridership-by-Mode-and-Quarter-1990-Present-2.xlsx>

²California Department of Motor Vehicles (2017). AB 60 Driver License. Available from <https://www.dmv.ca.gov/portal/dmv/detail/ab60/index>.

³Local routes operate on arterial roads and offer the most frequent service (most of them operate seven days a week, and others on weekdays). The 43 local form the backbone of OCTA’s network and contributed over 95% of OCTA’s boardings in 2017.

⁴OCTA’s 15 community routes connect pockets of transit demand with major destinations. They contributed approximately 2.5% of OCTA’s boardings in 2017.

⁵VRH represents the hours trains are scheduled to or actually travel while in revenue service. This includes layover and recovery time, but excludes deadhead, operator training, vehicle maintenance, testing, and charter service. VRH can also include scheduled revenue service even if there are no passengers on board.

⁶Saphores, J. D., Shah, D., & Khatun, F. (2020). A Review of reduced and free transit fare programs in California. Scholarship.org: <https://escholarship.org/uc/item/74m7f3rx>

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