What Do 15 Years of Travel Surveys Tell Us About TOD Residents?

Nathan McNeil, MURP, Jennifer Dill, Ph.D.

Does living in a transit-oriented development (TOD) actually change the way people travel? That's the fundamental question that 15 years of research in Portland, Oregon seeks to answer. Since 2005, Portland State University has worked with Portland's Metro regional government to survey occupants of buildings for which developers had received funding from Metro's Transit-Oriented Development (TOD) Program. Metro strategically invests in TODs to help more people live, work and shop in neighborhoods served by high-quality transit.

"Revisiting TODs," the latest installment in this research, is led by Nathan McNeil, a research associate in PSU's School of Urban Studies & Planning, and TREC director Jennifer Dill. The report revisits a set of suburban TODs with a second wave of surveys to understand how the travel behavior of TOD residents may have changed since the first survey. As neighborhoods become more developed with walkable amenities, how can we identify which factors influence changes in travel patterns?

BACKGROUND: 15 YEARS OF SURVEYS

Given the longstanding partnership between PSU and Metro, this research series was perfectly poised to investigate changes over time. Jennifer Dill, the director of PSU's Transportation Research and Education Center (TREC), led the first project in 2005. How do TOD residents commute? How often do they walk, bike and use transit compared with driving? Since then, the study has been periodically revisited:

1. 2006 Estimating the Impacts of TODs on Travel and Transit Use
2. 2007 Travel Choices at Transit-Oriented Developments: Survey Results from Portland's Eastside
3. 2010 Transit Oriented Developments Survey
4. 2014 Transit Oriented Developments Survey
5. 2020 Revisiting TODs: How Subsequent Development Affects Travel Behavior

WHAT'S NEW IN 2020?

The second-wave surveys, coming 8-13 years after the baseline surveys, include five TODs in the west-side Portland suburbs of Hillsboro and Beaverton, two TODs in East Portland, and eight TODs in the east-side Portland suburb of Gresham. Second-wave surveys were sent to the same buildings as the baseline surveys (in most cases, to every unit), but not specifically to the same people as in the baseline. Surveys asked about household travel options, daily travel for work and non-work purposes, and questions on travel preferences and attitudes.

"Some of these buildings were the first residential mixed-use buildings to go up near a transit station. So we wanted to find out, as those blocks nearby get filled in, does that have any impact on travel behavior? We selected buildings where we saw that there had been neighborhood change over time. Our hypothesis was that we wouldn't expect transit use to change all that much, but we might expect more walking and biking with a more built-out neighborhood in the immediate vicinity, and maybe more shops or restaurants nearby," McNeil said.

KEY FINDINGS

The second wave of surveys revealed three changes from the baseline that are consistent with the objectives of TODs: The share of people commuting to work by driving alone four to five days a week fell from 58% to 46%,

while the share never driving alone rose from 11% to 24%. The share of people walking or biking to work at least one day a week rose from 9% to 29%; and The share of people living in low-car households (fewer cars than adults) increased from 34% to 50%. The residents' attitudes about travel were very consistent between the two surveys. The only significant changes were:

- an increased preference for walking rather than driving whenever possible;
- a decrease in feeling that getting to work without a car is a hassle; and
- a decrease in whether gas prices affected daily travel choices.

Consistent with those changes, a higher share of respondents in the second-wave surveys indicated that having sidewalks in the neighborhood was extremely important in choosing their current home (43% in 2020 vs. 31% in earlier surveys) and a lower share said that easy access to the freeway was extremely important (16% vs. 22%). The importance of transit access remained steady at 48%.

The research team is working on further analysis, including multivariate analysis, to identify specific factors that may help explain the travel behavior changes we did observe, including factors related to neighborhood change.

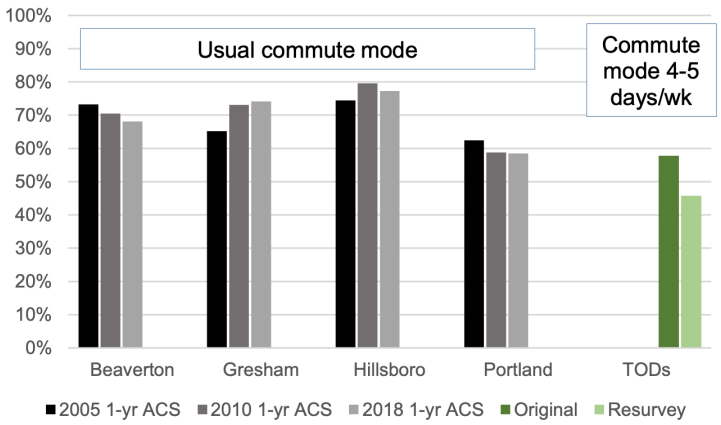

Figure 4-1 Commuting by drive alone, city residents vs. TOD respondents

IMPLICATIONS

Transit-oriented development (TOD) seeks to create a symbiotic relationship between two significant infrastructure investments: public transportation and residential and/or commercial buildings. How can policymakers maximize the potential of both? Dense mixed-use buildings provide potential transit riders, while proximity to quality transit provides building residents, employees and visitors with improved access to jobs, services and recreation. However, other factors in the urban environment around the station and TOD building affect the likely success of both. This research offers insights that can help planners understand the factors influencing travel behavior at TODs, including neighborhood features.

ABOUT THE AUTHORS

The research team consisted of Nathan McNeil and Jennifer Dill of Portland State University.

ABOUT THE FUNDERS

This research was funded by the National Institute for Transportation and Communities, with additional support from Metro and Portland State University.

THE FULL REPORT and ONLINE RESOURCES

For more details about the study, download the full report **Revisiting TODs: How Subsequent Development Affects the Travel Behavior of Residents in Existing Transit-Oriented Developments** at nitc.trec.pdx.edu/research/project/1240

Photo by Nathan McNeil

The National Institute for Transportation and Communities (NITC) is one of seven U.S. Department of Transportation national university transportation centers. NITC is a program of the Transportation Research and Education Center (TREC) at Portland State University. This PSU-led research partnership also includes the Oregon Institute of Technology, University of Arizona, University of Oregon, University of Texas at Arlington and University of Utah.