



Caltrans Division of Research,
Innovation and System Information

Research



Results



Planning, Policy, &
Programming

MAY 2019

Project Title:

Transit Oriented Development and
Commercial Gentrification

Task Number: 2833

Start Date: May 1, 2016

Completion Date: September 30, 2017

Task Manager:

Scott Williams
Associate Transportation Planner
k.scott.williams@dot.ca.gov

Transit Oriented Development and Commercial Gentrification

Examining the impacts of TOD investments on commercial
gentrification, transit ridership and pedestrian/cyclist accidents

WHAT IS THE NEED?

Affordable housing advocates argued that the gentrification and displacement associated with transit oriented development (TOD) investments could in fact result in more automobile trips, longer distances, and greater emissions of GHG. Commercial districts played a key role not only in the attainment of walkability and livability goals of TODs, but also in the State's quest to reduce automobile trips and GHG emissions. However, research is emerging that highlights the links between residential gentrification and the decline in some areas of small, ethnically-owned businesses, as the rising land values and subsequent rents associated with TOD could drive out locally serving enterprises.

Additionally, the economic development associated with commercial TOD districts could have significant consequences on pedestrian and cyclist safety. Gentrifying commercial districts may attract automobiles, which are heavily utilized for shopping trips, and a large percentage of automobile-pedestrian collisions occur in areas of higher residential and employment density, as increased foot traffic means increased exposure to automobile traffic. The gentrification effects of TOD and Commercial development needed to be identified.

WHAT WAS OUR GOAL?

Through quantitative and qualitative analysis, the researchers expected to acquire a better understanding of the factors that may led to commercial gentrification in some TOD areas, and how the changes impacted existing businesses, as well as neighborhood travel patterns and traffic safety. The modeling and case studies were expected to shed light on these relationships, revealing where TOD investments and associated commercial



Caltrans provides a safe, sustainable,
integrated and efficient transportation
system to enhance California's
economy and livability.

change may lead to increased or decreased transit use and non-motorized travel. The analysis will aid policymakers, transportation planners and urban designers to better understand these relationships and promote design and policy interventions to address the negative effects of TODs.

WHAT DID WE DO?

This project extended the researchers' understanding of gentrification and displacement into the commercial realm by conducting both a macro- and a micro-analysis. The macro-analysis extended on the existing multi-level databases for the Bay Area and Los Angeles County that include parcel- and neighborhood-level data on commercial establishments, real estate transactions, demographics, housing affordability, rail transit stations, joint development, and other indicators, with a new, more detailed analysis of retail change including business dynamics such as relocation and closure. They then linked this information to rail transit ridership data to assess the corresponding impact of commercial change on transit trips. Additional data on pedestrian and bicycle crashes was analyzed to understand the links between commercial gentrification and pedestrian/cyclist safety.

This research was aimed to identify answers to the following questions regarding gentrification effects of TOD and Commercial development:

- Where is commercial gentrification occurring in relation to rail TODs?
- What are the social-demographic, land use, and urban form characteristics of rail TODs associated with commercial gentrification?
- Is commercial gentrification associated with TOD investments resulting in more or less reliance on rail transit?
- Is commercial gentrification resulting in more or less pedestrian-/cyclist-automobile crashes in rail TOD neighborhoods?

WHAT WAS THE OUTCOME?

From these analyses, the researchers are able to identify four case study TOD neighborhoods to conduct quantitative and qualitative research on commercial change and its impact on travel patterns, economic development, and pedestrian/cyclist crashes to better understand these relationships. The research method produced the following results:

- Commercially gentrified stations are generally characterized by an influx of eateries, cafés, and bars.
- Proximity to a transit station is likely not associated with commercial gentrification. More important factors that may relate to commercial gentrification are the demographic characteristics of a neighborhood, particularly the percent of non-Hispanic black, foreign-born, and renter residents, as well as overall population density. In some contexts, residential gentrification may lead to commercial gentrification.
- Commercial gentrification may contribute to increases in total, cyclist-involved, and pedestrian-involved average annual crashes around rail transit stations. It is unclear if this is directly due to the phenomenon of commercial gentrification or if it is related to an increase in traffic that occurs in commercially gentrified areas.
- Commercial gentrification does not appear to have a significant effect on rail transit ridership. Residential gentrification in Los Angeles, on the other hand, may lead to reduced rates of transit ridership in the decade after the residential gentrification occurs.
- Merchants generally indicated that rising rent costs were the most prominent aspect of neighborhood change putting pressure on their businesses' bottom line.



WHAT IS THE BENEFIT?

This research will help to address the growing interest from local planners and policymakers about these issues, as TODs are hoped to not only contribute to the next iteration of each region's Sustainable Community Strategies, but also to their local economic development and neighborhood revitalization. The researchers plan to present their results to local and regional governments and transportation agencies in the Bay Area and Los Angeles, as well as to staff and decision-makers in the California state government, such as in webinar or workshop format, including training on the use of the early warning toolkit for commercial gentrification developed through this project