Metropolitan Transportation Commission

January 22, 2020 **Agenda Item 10**

Bay Area Transit Ridership Trends Study

Subject: A presentation by UCLA on a Bay Area transit ridership trends study on project findings and the policy framework recommendations.

Background: The Metropolitan Transportation Commission partnered with the UCLA Luskin School of Public Affairs (UCLA) to develop a transit ridership trend study for the Bay Area. The effort is modeled on a similar effort completed in 2018 by the Southern California Association of Governments (SCAG) and the UCLA research team.

After consultation with a number of Bay Area transit general managers on a scope framework, MTC entered into an agreement with UCLA to undertake the study and develop a set of policy framework recommendations based on study results. The study was guided by a Technical Advisory Committee (TAC) made up of planning staff from large (and some small) transit operators. The policy framework recommendations were developed with input from the TAC and transit general managers.

The study objective was to understand more about recent ridership declines, investigate possible causes, and establish a framework for reversing these trends at the regional and agency level.

At the January 22nd Commission meeting, the UCLA project team will present project findings and the policy framework recommendations

Recommendation: Staff requests Commission input on the findings, the policy framework, and the application of this study when developing future Commission policy.

Attachments: Presentation

Therese W. McMillan

UCLA Institute of Transportation Studies

What's Behind Recent Transit Ridership Trends in the Bay Area?

Presentation to the Metropolitan Transportation Commission

Brian D. Taylor, Jacob L. Wasserman, and Julene Paul

22 January 2020

Introduction

Research reported here was conducted by:

- **Evelyn Blumenberg**, PhD (Co-Principal Investigator)
- **Mark Garrett**, PhD
- **Hannah King**
- **Julene Paul**
- **Madeline Ruvolo**
- **Andrew Schouten**, PhD
- **Brian D. Taylor**, PhD (Principal Investigator)
- **Jacob L. Wasserman** (Project Manager)

Find further reports, briefs, and film at www.its.ucla.edu/transit/.

Agenda

1	Principal Findings
2	Contours of the Decline
3	Possible Causes
4	Policy Framework
5	Questions, Discussion, and Feedback

Principal Findings

Principal Findings: Trends in Bay Area Transit

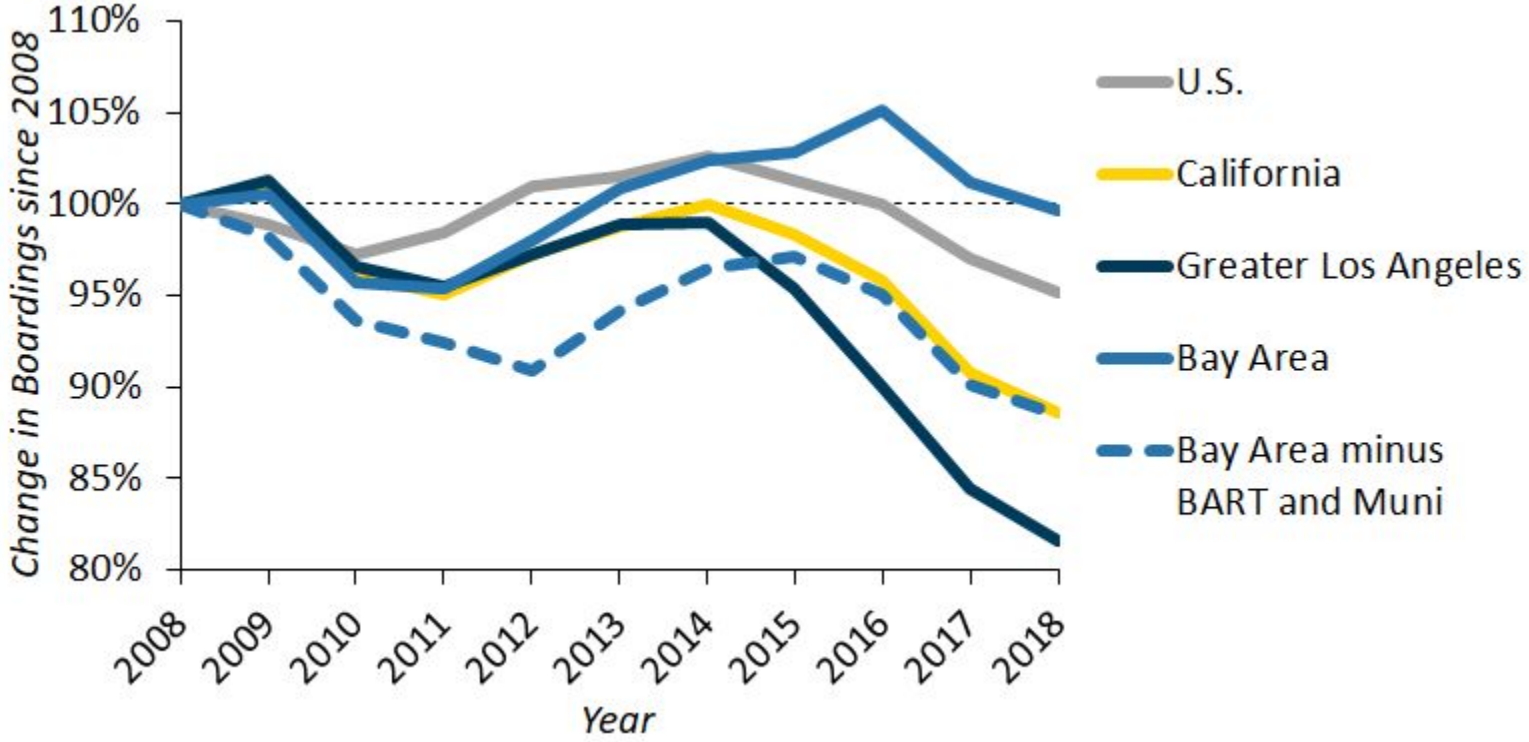
- Bay Area ridership has fallen, but more recently and less steeply than in the rest of state and nation
- Ridership increasingly is concentrated in peak times, commute directions, and central areas
    - Off-peak declines are far steeper
- Ridership: increasingly commute-oriented, “choice riders”

Principal Findings: Trends in Bay Area Transit

- Agencies' patronage trends primarily differ based on whether they serve job centers, especially downtown San Francisco
- Evidence suggests that rising housing prices and ridehail use loom large, but data, time, and resource limitations prevent definitive conclusions

Contours of the Decline

Contours of the Decline: Ridership Trends



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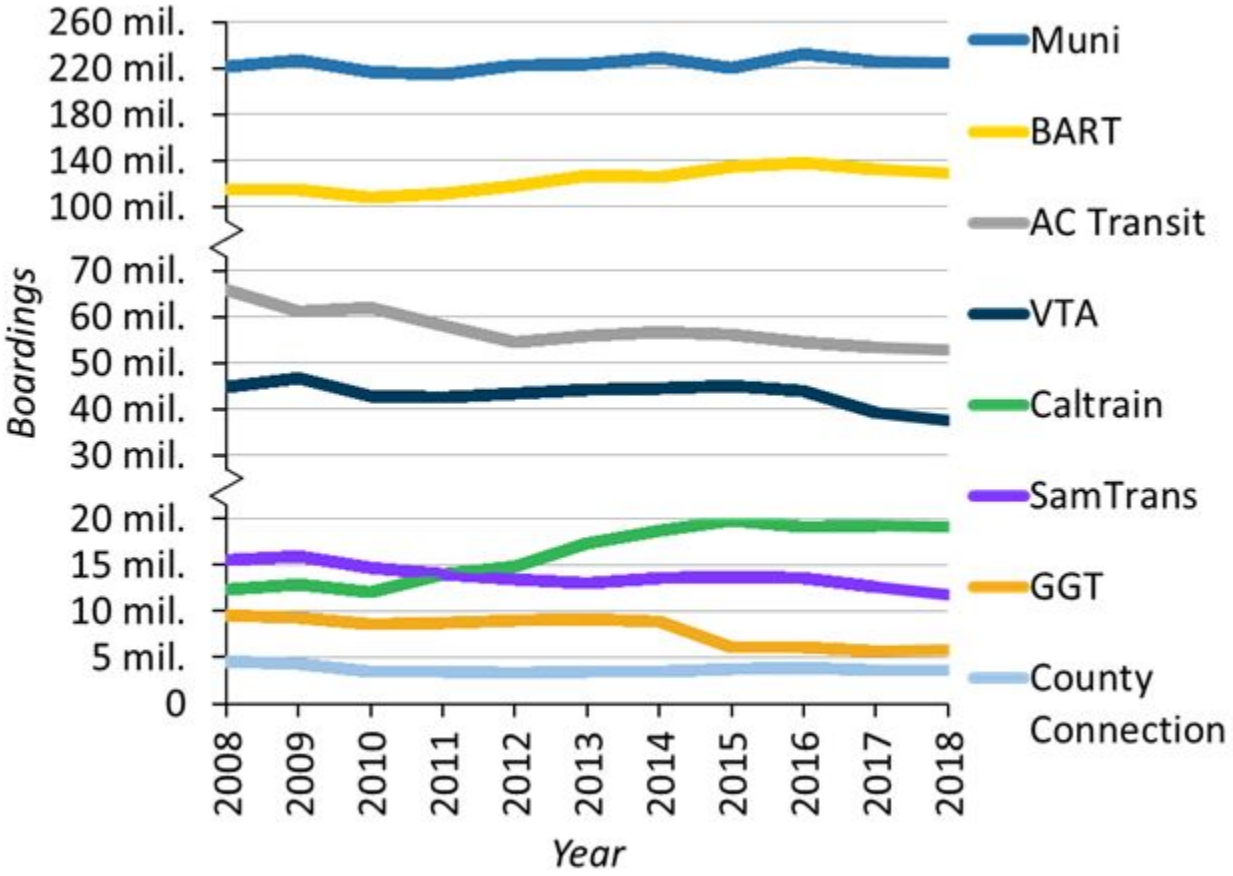
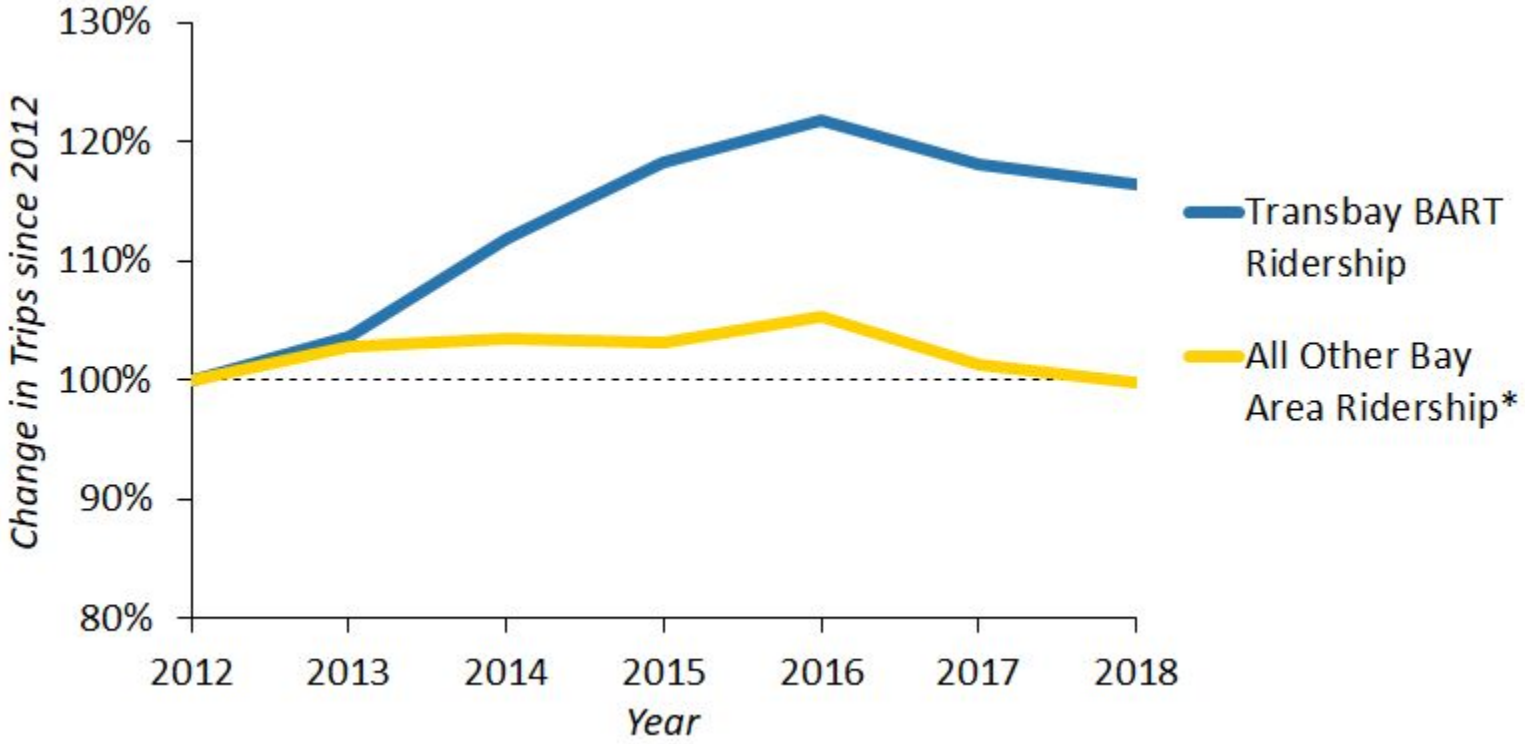
Data source: National Transit Database

Contours of the Decline: Ridership by Operator



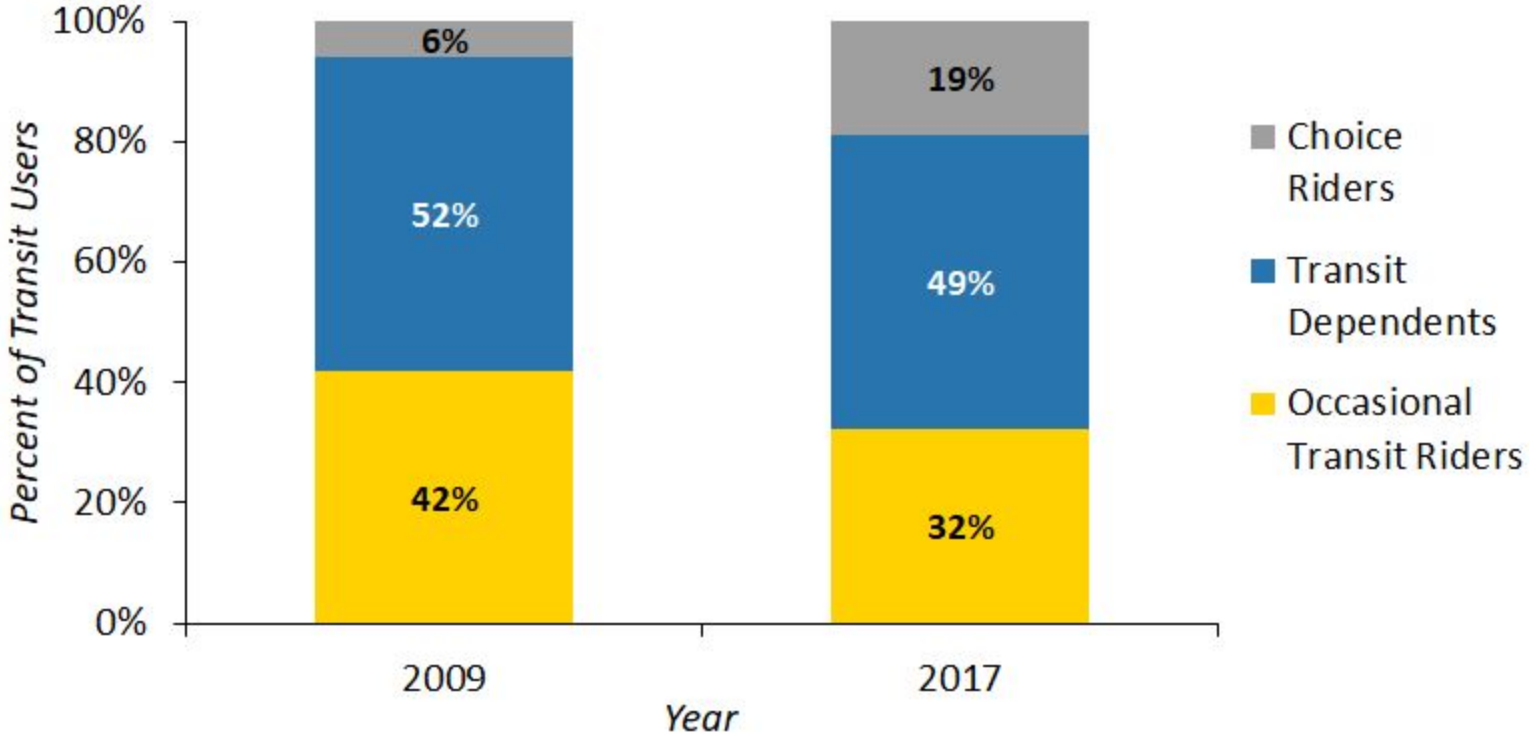
Data source: National Transit Database

Contours of the Decline: Transbay Ridership



** unlinked total MTC trips minus linked transbay BART trips*
Data source: BART origin-destination matrices and National Transit Database

Contours of the Decline: Changing Riders



Data source: 2009 and 2017 National Household Travel Surveys, California Oversamples

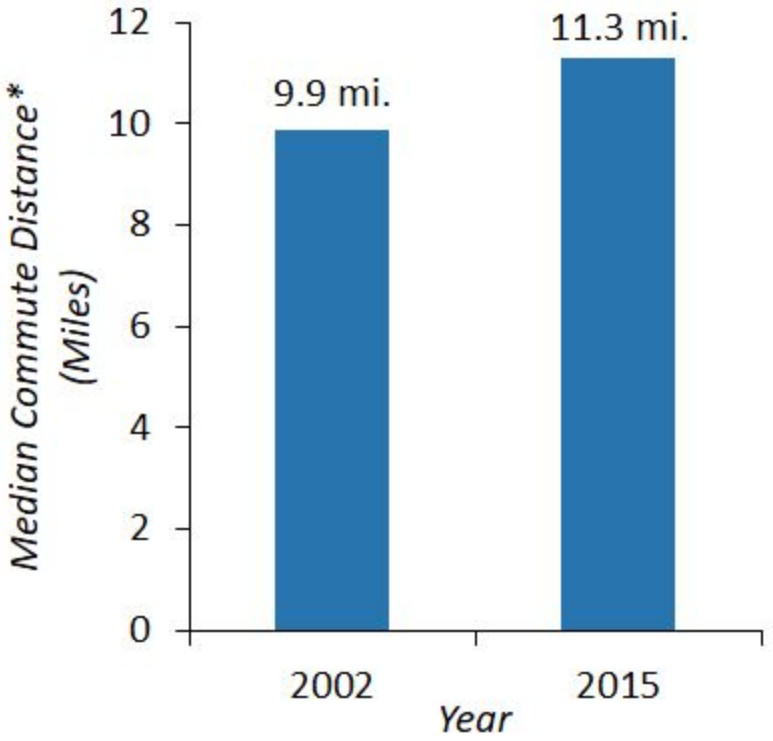
Possible Causes

Possible Causes: Why the Decline?

Possible Causes: Suggestive Evidence

Changing Residential Locations Relative to Jobs

- Commute distances getting longer
- Some concentration of jobs and workers in transit-rich neighborhoods, but continued dispersion in other areas of region
- Context: Bay Area housing affordability crisis



** straight line distance*

Data source: LEHD Origin-Destination Employment Statistics

Possible Cause: Jobs-housing Imbalance

*Independence Index**	2002	2015	Percent Change
All Bay Area Cities (89 Municipalities)	6%	5%	-17%
Largest 25 Cities	8%	6%	-25%
Largest 5 Cities	21%	18%	-14%

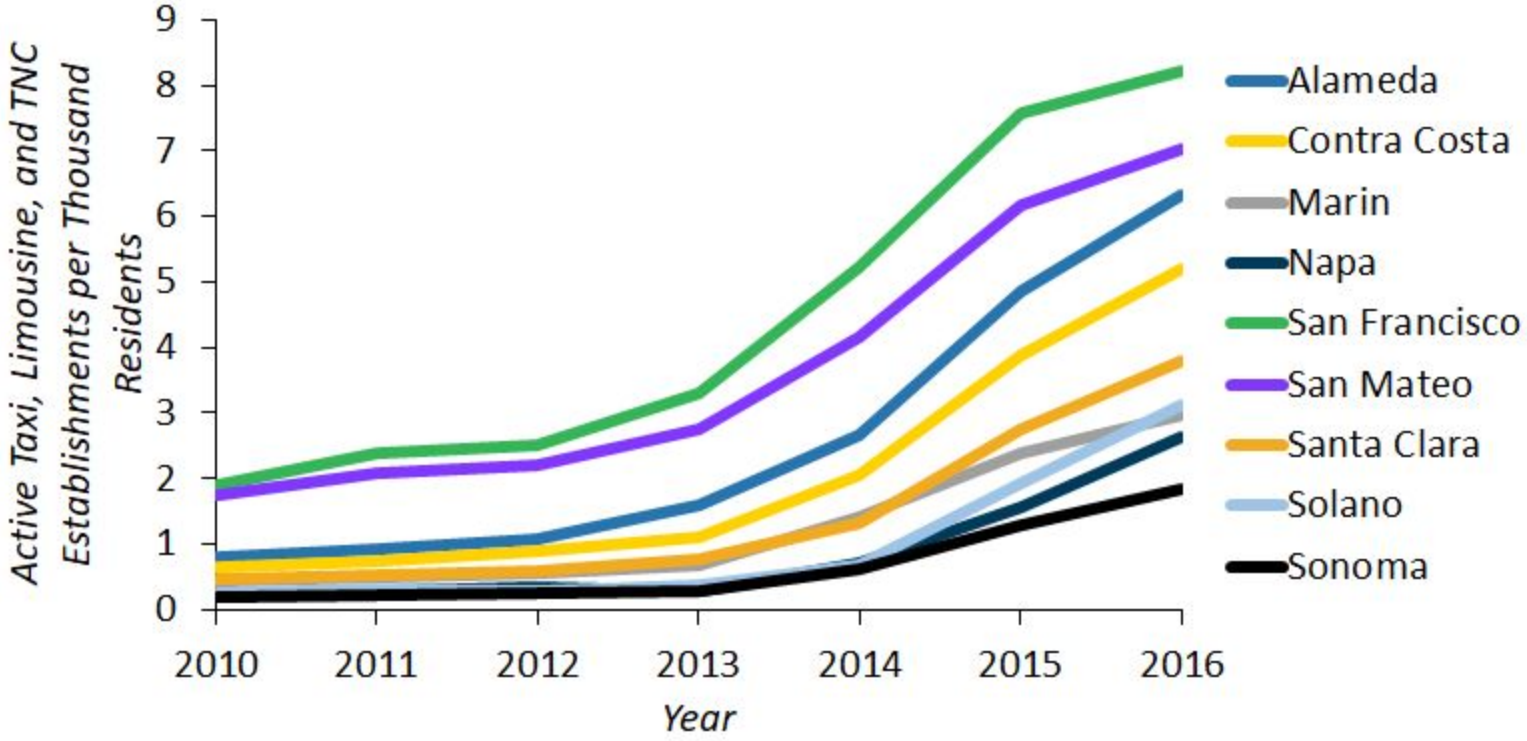
** internal work trips (work and live inside city) divided by external work trips (work outside city + live outside city)*
Data source: LEHD Origin-Destination Employment Statistics

Possible Causes: Suggestive Evidence

Ridehail/TNCs

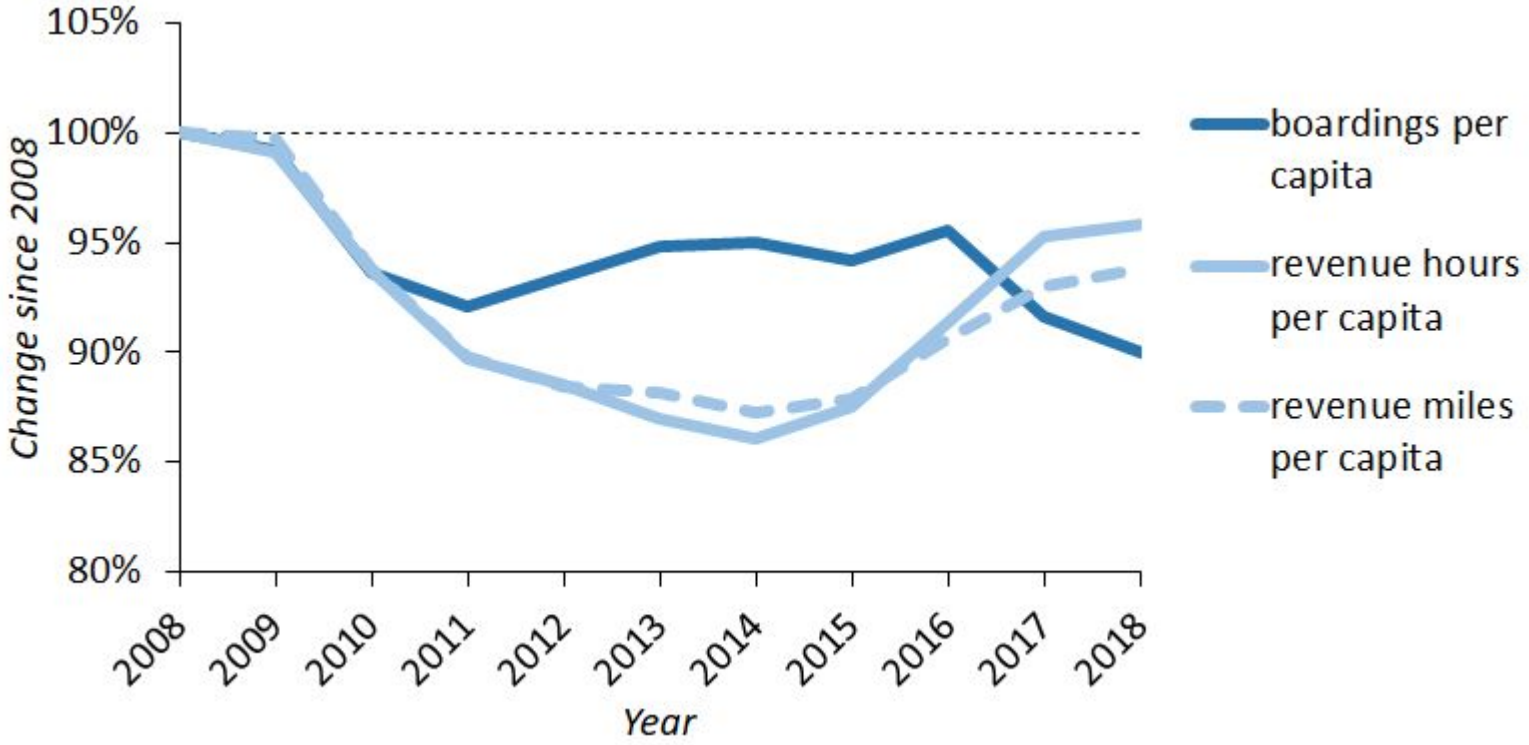
- Ridehail use appears to be highest where transit use is highest
- Ridehail's strongest market is during hours when transit is most losing riders: off-peak
- Very hard to say more without better TNC data

Possible Cause: Ridehail



Data source: U.S. Census Nonemployer Statistics

Causes Ruled Out: Service Quantity



Data source: National Transit Database, American Community Survey, and U.S. Census

Cause (Largely) Ruled Out: Rider Satisfaction

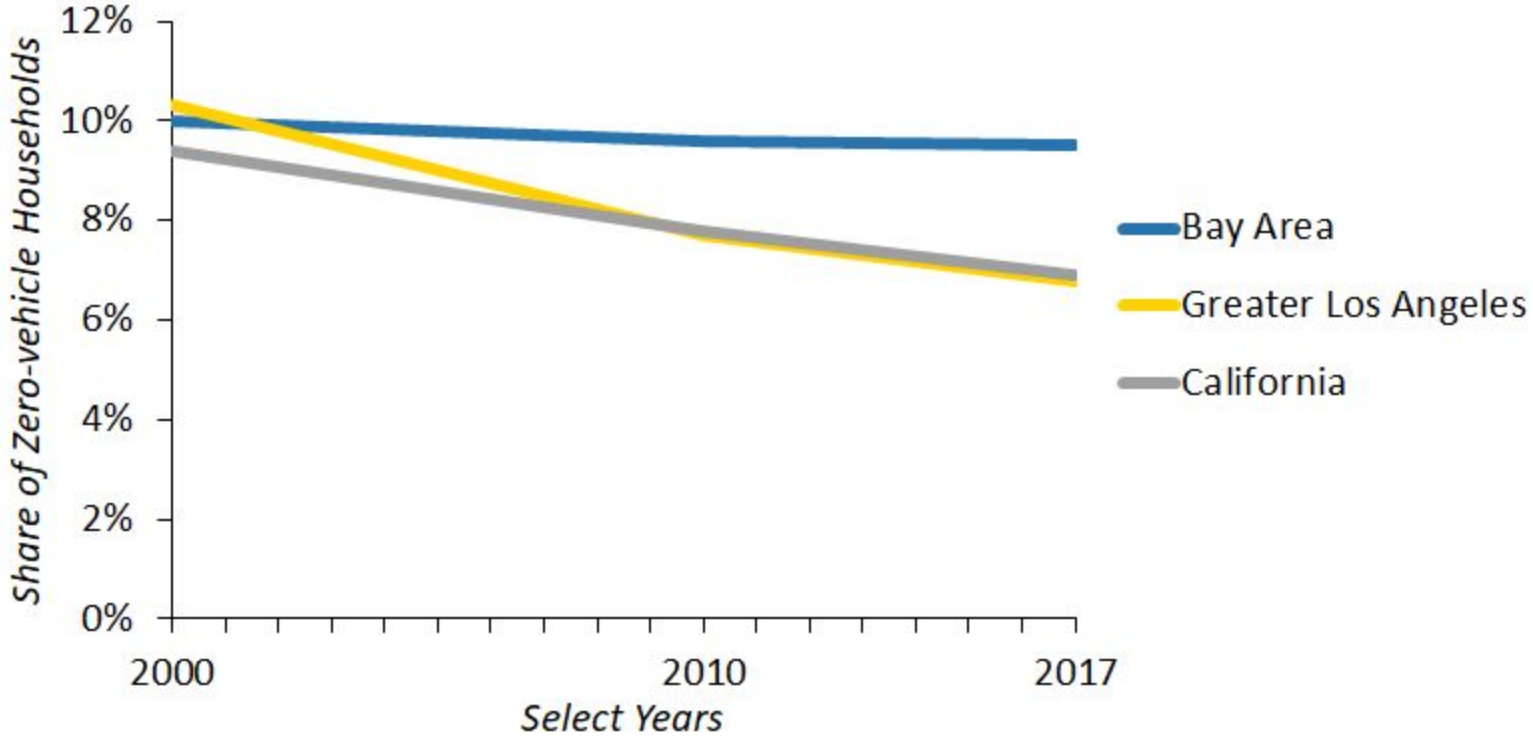
- Rider satisfaction across operators: not strongly correlated with ridership

Operator	Change in Ridership, 2012-2018	Change in Satisfaction, 2012-2018*
Muni	+1%	+2%
BART	+9%	-33%
VTA	-14%	-3%

- Dissatisfaction over cleanliness, crowding, etc. may slightly lower patronage on large operators—but these issues are often consequences of *high* ridership (especially at peak periods) instead

** VTA satisfaction: 2013-2017*
Data source: National Transit Database and operator surveys

Causes Ruled Out: Changes in Auto Access



Data source: IPUMS (Ruggles et al., 2019)

Other Potential Causes

Ruled Out

- Transit fares
- Fuel prices

Largely Ruled Out

- Employer shuttles

Warrants Further Exploration

- Congestion
- AB 60

Policy Framework

Policy Responses to Falling Transit Use

- Ridership declines to date are relatively modest
  - Little evidence that losses stem from particular short-term actions by Bay Area transit operators, such as fare and service changes
  - Transit research offers strategies to improve services and attract riders; some of these strategies are not directly linked to our findings

Policy Responses to Falling Transit Use

- Our findings do point to policy realms not directly related to transit:
  - *Jobs-housing balance:* Housing and jobs are increasingly located farther apart, and cities are less self-contained. For longer commutes outside of large central business districts and non-work trips, transit becomes less competitive
  - *Affordable housing:* Rising housing prices are likely contributing to lengthening commutes, which may be affecting transit use
  - *Ridehail:* Growth is likely pulling (especially off-peak) riders from transit

Policy Framework

Policy Category	Potential Policy Responses	Supporting Evidence
Transit service improvements	● Improve rapid bus/rail services in dense areas with dedicated rights of way, based on examples such as SFMTA Rapid Network and AC Transit Rapid Routes ● Invest in fleet and operational improvements to increase effective service capacity, reduce crowding, and enhance customer experience ● Look for ways to improve off-peak services to attract new riders ● More broadly, improve services that link housing and job concentrations, and consider land-use changes as both complements and alternatives	Report Volume II
Demand-based fares	● Investigate off-peak incentives to reduce peak crowding and increase off-peak ridership	Other research
Regional integration & seamless mobility	Continue regional and local efforts including: ● Fare integration ● New mobility pilots	Other research

Policy Framework

Policy Category	Potential Policy Responses	Supporting Evidence
Data on private-sector transportation	• Regular reporting of relevant data by private new mobility/micromobility providers	Report Volume I
Management of private vehicle travel	• Investigate and pilot-test road- and parking-pricing programs and projects to reduce congestion and increase the relative attractiveness of transit because traffic congestion makes transit less time-competitive and increases operating costs	Report Volumes I and II; other research
Land use near transit	• Broaden the focus of TOD: increase employment & housing near one another • Consider financial incentives to promote such strategies	Report Volume I
Affordable housing	• Increase the supply of affordable housing near jobs	Report Volume I

Questions, Discussion, and Feedback

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