Residential Moves Into and Away from Los Angeles Rail Transit Neighborhoods: Adding Insight to the Gentrification and Displacement Debate

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Project Objective

Policy activity in California and throughout the world is increasingly focused on neighborhood gentrification and displacement. Yet an important and related question has been overlooked. When persons or households move away from a gentrifying area, where do they go? What are the amenities and opportunities of the places these households move into and how do they compare with those from which they moved? Similar questions can be posed for households that move into gentrifying areas.

We study moves into and away from rail station neighborhoods in Los Angeles (admittedly, not necessarily places that are gentrifying, but the literature has established new rail stations as locations of possible gentrification.) Since 1990, the Los Angeles County Metropolitan Transportation Authority (L.A. Metro) has built a rail transit network that has gone from non-existent (in 1990) to 93 stations today.

We use confidential, anonymized agency data on household income and location, along with open source transit network data to describe the flows of households into and out of Los Angeles half-mile rail transit neighborhoods between 2014 and 2015. We develop two primary groups of results. First, we ask what happens to job access via transit when households move away from, or into, neighborhoods within a half-mile of a rail transit station. We find that moves away from rail transit are associated with large decreases in transit job access – a not unsurprising finding, but the magnitude of the change is substantial. Second, we categorize the census tracts that are the most common locations for residents moving out of rail transit neighborhoods, and demonstrate that the locations where households most commonly move to when leaving a rail transit neighborhood have public high schools with lower California Academic Performance Index scores, higher poverty rates, and higher proportions of Black and Hispanic residents compared to the average for Los Angeles County.

Data

For residential mobility and household-level characteristics, we use data from income tax filings obtained from the California Franchise Tax Board (FTB). The data universe contains anonymized information on all households who filed taxes in Los Angeles County in 2014 and 2015, even if they lived outside of the County or California in one of those years, as long as they filed California taxes in one of the two years.

We examine household level moves away from or into census tracts that contain a rail transit station, from 2014, to 2015. We calculate the resulting job access (via transit) change associated with those moves by calculating job access via transit for every one of the 2,345 census tracts in Los Angeles County, and then comparing the job access measure for movers in their 2014 and 2015 home census tract. Job access calculations for movers based on census tract of location were generated using the automated Remix access tool (aRat), developed by Swayne and Kundaliya (2020) and used in Painter,

Boarnet, Swayne, & Miller (2018) and Swayne, Boarnet & Painter (2019). The aRat program, in turn, uses the Remix commercial software tool to get travel distances (isochrones) from the centroid of each census tract, for 15, 30, 45, and 60 minute travel times. Then we use the U.S. Census Bureau's Longitudinal Employment Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) census block- level data from 2015 to estimate jobs available within those transit travel times from each tract.

After analyzing transit job access changes for moving households, we identify the top sending and receiving tracts (for in- and out-movers from rail neighborhoods) through the tax data. We then use American Community Survey (2015) data and data on California Academic Performance Index (API) for the public high school that serves each tract (in 2013, which is the most recent year for which API data are available) to examine characteristics of sending and receiving tracts.

Results

Changes in Job Access via Transit for Moving Households

When households move out of rail station areas, they on average lose transit access to jobs, and when households move into rail station areas, they gain transit access to jobs. We note that the transit job access is over all transit modes – bus and rail. The pattern of gain and loss is not surprising, but the magnitudes are important. On average, households moving away from rail transit half-mile areas experience a reduction in transit job access of 138,087 for a 30-minute peak travel time. Households moving into rail station neighborhoods see an average increase of 162,071 transit accessible jobs. Kernel density plots of job access changes for households that move away from rail station census tracts are shown in Figure 1, for 15, 30, 45, and 60 minute travel times. Each plot illustrates that the largest number of moving households experienced substantial reductions in job access via transit.

Figure 1. Kernel Density Plots job access difference for out-Movers by isochrones
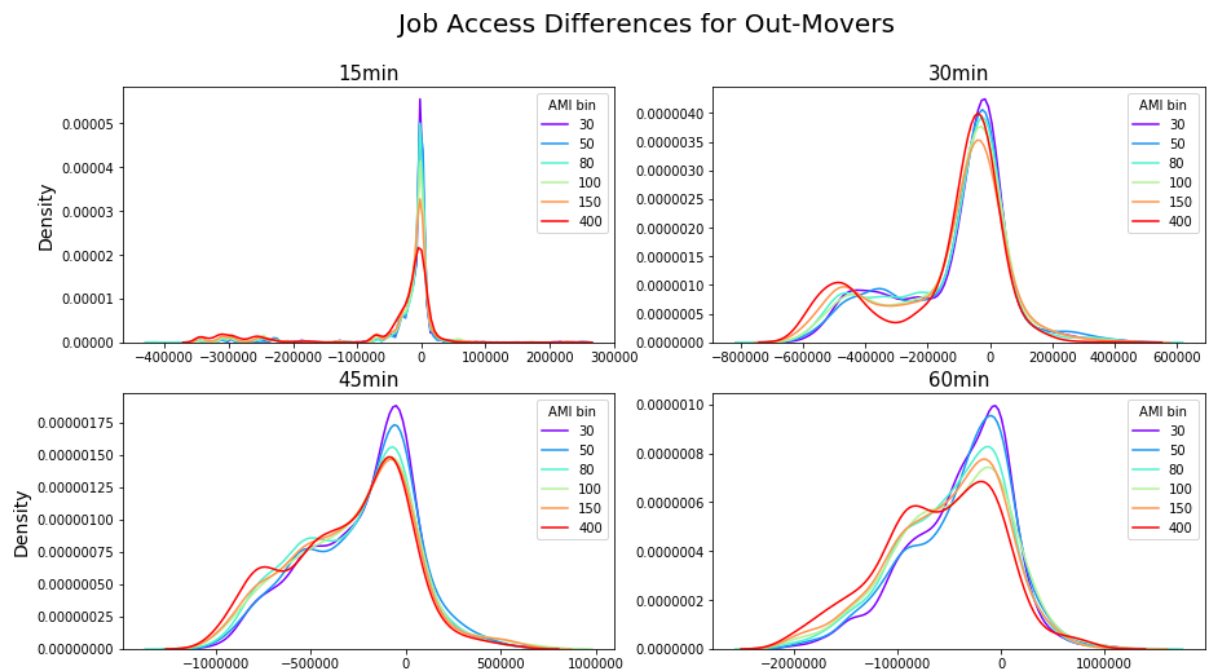
Note: Households are classified into income groups based on U.S. Department of Housing and Urban Development Area Median Income (AMI) for Los Angeles County for 2014 ($60,600), and the colored lines indicate households with income below 30 percent of AMI, 30-50 percent of AMI, 50-80 percent of AMI, 80-100 percent of AMI, 100-150 percent of AMI, and 150-400 percent of AMI.

The average changes in transit job access for moving households are approximately 20-25% of the highest census tract transit jobs access level in Los Angeles County. Residential moves into and out of rail station neighborhoods lead to large changes in transit job access. These large job-access fluctuations occur despite the fact that the average move in and out distance was a mere 4 kilometers, possibly illustrating important gaps in rail transit connectivity away from rail transit stations in the county.

Characteristics of the Locations that Receive and Send Moving Households To/From Rail Neighborhoods

We examine the characteristics of the places to which and from which households move. We call census tracts to which households move when leaving a rail transit tract "receiving tracts", and census tracts that do not contain a rail station but from which households move when moving to a rail transit tract are "sending tracts." Figures 2 and 3, respectively, show the top 20 percent of receiving and sending tracts.

Figure 2. Top 20 Percent of Receiving Tracts (Households Move to These Tracts when Leaving Rail Station Census Tracts)
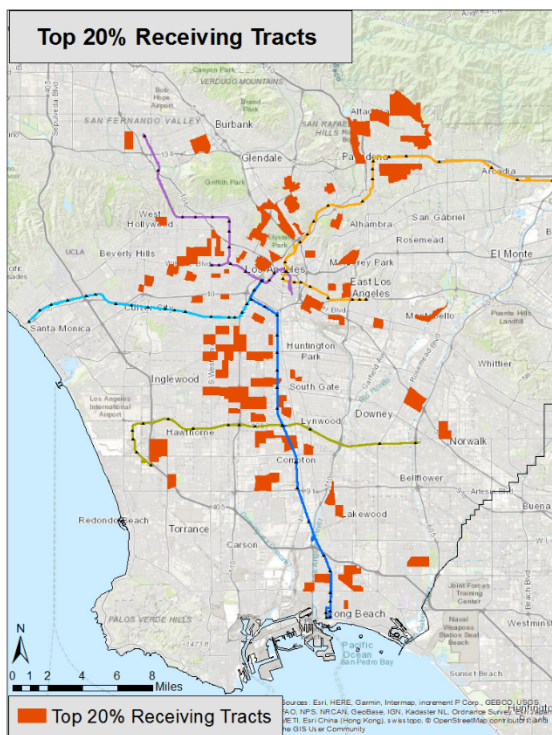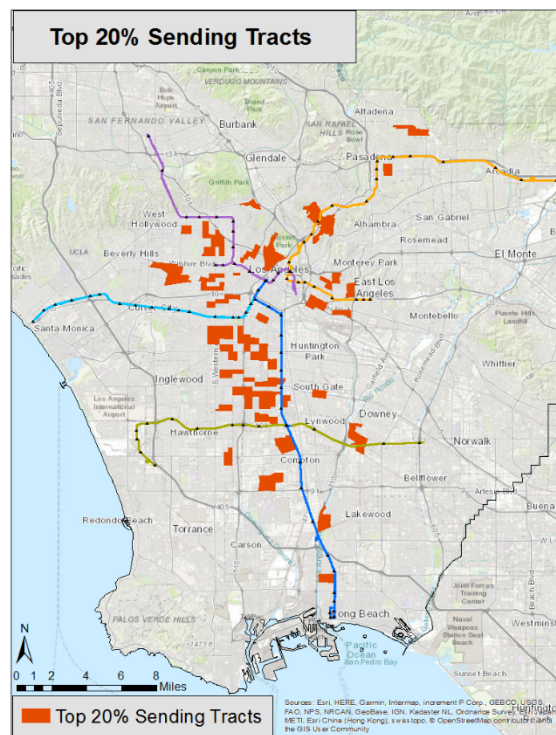

Figure 3. Top 20 Percent of Sending Tracts (Households Move from These Tracts when Moving to Rail Station Census Tracts)

The census tracts that receive the highest share of households that move out of rail stations also have lower quality schools, higher poverty rates, and higher shares of minority households relative to the Los Angeles County average (see Table 1). The same holds for the tracts that send the highest share of households to rail station areas.

Table 1. Characteristics of Top Sending and Receiving Tracts, Relative to Los Angeles County

	High School API score	Poverty Rate		Race	
		Below 100%	Below 200%	% Black	% Hispanic
All LA County	744	18.6	40.8	8.5	47.7
Receiving Tracts					
Top 10% receiving tracts	698	27.0	55.4	14.2	58.6
Top 20% receiving tracts	700	24.8	52.9	13.8	58.7
Top 30% receiving tracts	698	22.6	49.9	14.3	54.4
All receiving tracts	735	19.7	43.1	9.3	51.2
Sending Tracts					
Top 10% sending tracts	687	26.5	58.4	14.7	61.3
Top 20% sending tracts	685	28.6	59.4	14.5	64.2
Top 30% sending tracts	699	26.8	56.3	15.5	61.0
All sending tracts	735	19.6	42.8	9.3	50.4

Findings and Recommendations

The results illustrate the importance of focusing on transit access throughout Los Angeles County. Of the 120,281 households within half-mile areas of a station for whom we have income data, nine percent moved between 2014 and 2015. When households move away from rail transit areas, they move to locations that provide, on average, access to almost 140,000 fewer jobs via transit despite very short moves (~4km). Planners and policymakers should focus on providing more robust transit access throughout Los Angeles County. Residential relocation is common at all income levels, and while we do not minimize concerns about displacement, we note that robust transit access in locations away from the rail system can help maintain job access for households who do move away from rail station locations.

References

Painter, Gary, Marlon G. Boarnet, Madison Swayne, and Matthew Miller. 2018. Innovation on Job Accessibility and Transit Scenario Planning with General Transit Feed Specification (GTFS) Data. Final Report. METRANS Project 16-07.

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