

# **Is Los Angeles Becoming Transit Oriented?**

## **Executive Summary**

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<sup>1</sup> The analysis and conclusions set forth are solely the responsibility of the authors and do not indicate concurrence by the Board of Governors or other staff in the Federal Reserve System.

## Background

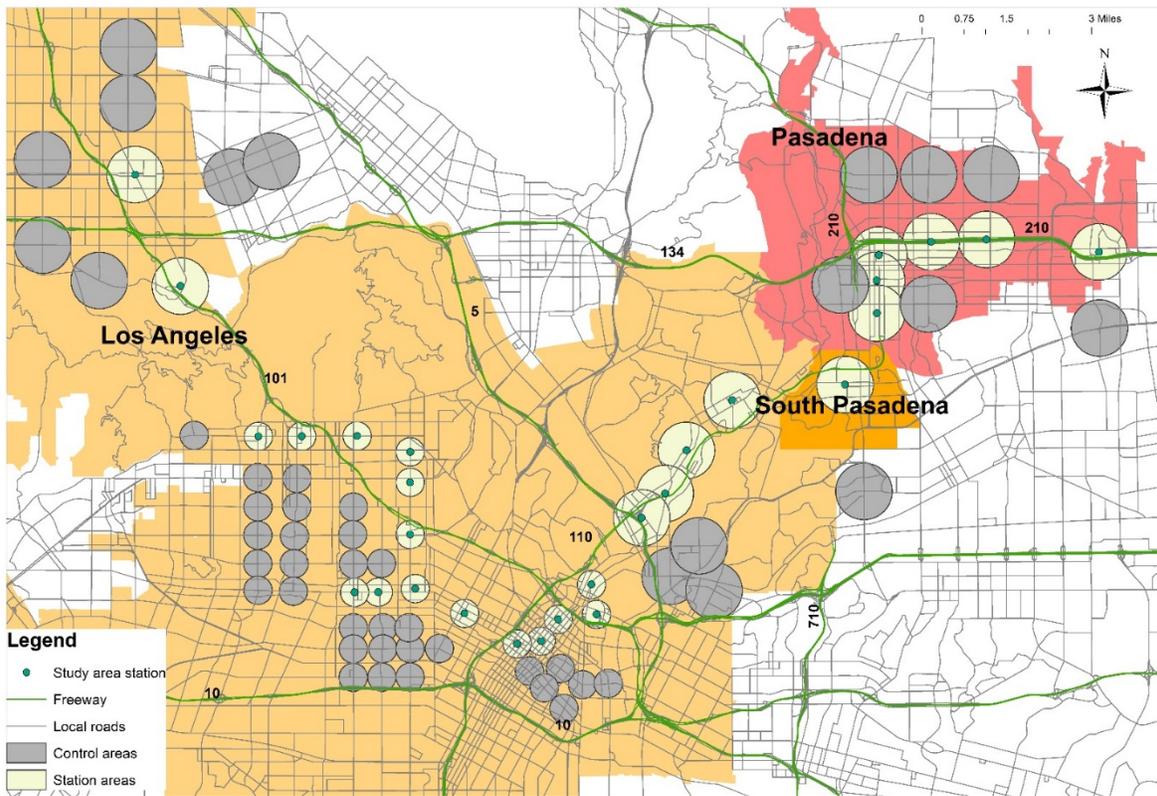
For most of the 20th century, Los Angeles was the quintessential car-oriented city. But over the past 20 years, policymakers have invested significant resources – local, state, and federal – in building rail transit infrastructure that connects major employment centers, including downtown Los Angeles, Long Beach, Pasadena and part of the Wilshire Corridor. One goal of transit infrastructure is to catalyze the development of high density, mixed-use housing and commercial activity within walking distance of rail stations, referred to as Transit Oriented Development (TOD). By increasing the accessibility of station areas to other transit nodes, building new stations should increase surrounding land values, leading to higher intensity development. Prior academic research has found mixed evidence for whether rail stations impact transit ridership, property values, residential development, and employment. Casual observation of the Los Angeles area also suggests that development near stations has occurred unevenly, with some areas in the vicinity of rail stations experiencing noticeable growth in apartments, stores and services, while others have seen little change. In this paper, we examine the quantity, type, and mixture of economic activity that has occurred around rail stations in Los Angeles. Specifically, we ask whether newly opened station areas experienced employment growth or housing market changes consistent with TOD.

## Study design

The analysis focuses on 28 stations that opened between 1990 and 2003 along the Red, Purple and Gold lines of the Metro rail system, located across Los Angeles, Pasadena and South Pasadena. To understand how the opening of these stations has affected employment and housing markets nearby, we combine establishment-level employment data from 1992 to 2009 with property-level information on housing sales from 1988 to 2013. We measure the level and

industrial composition of employment and the volume and type of housing sales, within one-quarter and one-half mile catchment areas of newly opened rail stations, before and after opening. As a comparison group, we identify a set of major road intersections more than one-half mile from any rail station, but within three miles of stations. We use a difference-in-differences approach to compare changes in employment and housing outcomes pre- and post-opening for station and control areas, as well as estimating annual changes for several time windows before and after station opening.

**Figure 1: Station and Control Areas**



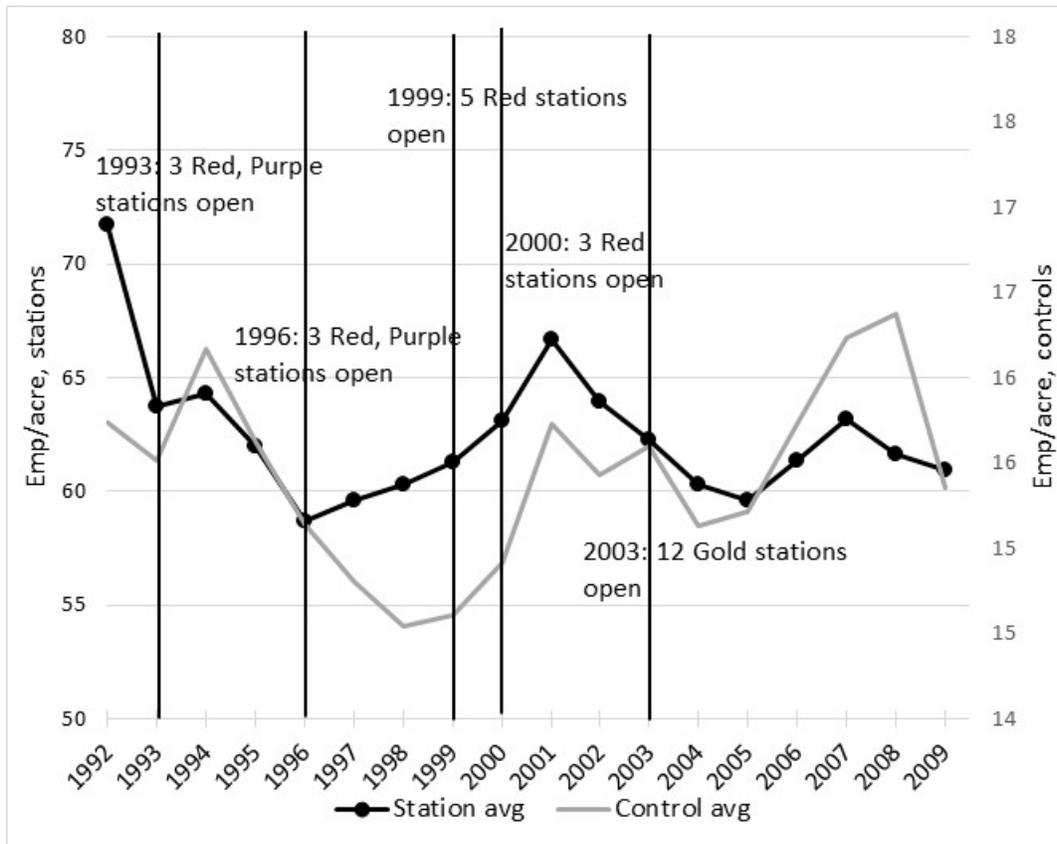
In addition to the quantitative analysis, we present case studies of three stations to illustrate how land use regulation and other public interventions may play a role in development

near stations. In theory, zoning has the potential to either constrain or enhance the probability of successful TOD. Zoning that restricts the density or type of allowed uses near stations may limit development even in the presence of strong market factors. Conversely, increasing the allowable density that can be built in a desirable location will increase land values even in the absence of transit infrastructure, because it increases the expected returns to development. We present detailed information on zoning and land use patterns around three stations – Hollywood and Vine, Civic Center, and Del Mar – that have experienced varying trajectories since the stations opened. The stations are not intended to be representative, nor do the case studies allow us to infer a causal relationship between zoning and development outcomes, but these examples are intended to illustrate the complexity of development in the Los Angeles region.

## Results

The quantitative analysis indicates that areas selected for new stations had unusually high employment density and largely multifamily housing stock, prior to station opening, but did not experience significant gains in either employment or housing outcomes after stations opened. Descriptive statistics and regressions both indicate that station areas did not see employment growth or changes in the composition of employment within the first five years after stations opened. Regression results suggest that a small group of stations that opened between 1996 and 1999 saw significant employment gains between five and ten years after stations opened. It is unclear whether this reflects the time needed for land use patterns to adjust, or whether results are unique to the particular set of stations for which data on long-term outcomes are available.

**Figure 2: No clear trend in employment density for station areas vs control areas**



Results also indicate that housing markets around station areas experienced no significant changes in sales volume, new housing development, or composition of sales after stations opened. For those stations with sufficient sales volume to analyze price changes, housing prices near stations increased by less than prices in control areas after stations opened. A limitation of our analysis is that data are not available on changes in rental housing markets near stations, although many stations are located in predominately renter-occupied neighborhoods.

The three stations examined through qualitative case studies – Hollywood and Vine, Civic Center and Del Mar – illustrate the diversity of land uses and development histories around Los Angeles stations. Both the Hollywood and Vine and Del Mar stations are surrounded by a mixture of land uses, including relatively high density residential buildings and commercial

activity, such as shops and restaurants. Land around the Civic Center station is almost entirely occupied by public facilities (government office buildings and related uses), which do not permit residential or commercial development. The City of Pasadena undertook a substantial rezoning effort around the time that the Gold Line stations opened, creating a new specific plan around all three downtown stations that encouraged “urban density” mixed residential and commercial uses. In contrast, the City of Los Angeles did not consistently update zoning around all station areas during the study period, but did facilitate redevelopment efforts at selected stations. LA’s Community Reinvestment Agency (CRA) used eminent domain to help assemble land parcels near the Hollywood and Vine station, enabling the MTA and a private developer to undertake a large-scale redevelopment of the station area, resulting in new apartments, condominiums, a hotel, and substantial restaurant and retail space. Even with concerted efforts by public agencies, the redevelopment project took nearly eight years to complete. The Del Mar station has seen a limited amount of new residential and small-scale commercial development immediately adjacent to the station, consistent with the new specific plan. The primary change near the Civic Center station has been the recent development of Grand Avenue Park – a public sector rather than market-based investment.

### Summary and policy implications

Why has there been no consistent evidence of transit-oriented development around new MTA rail stations? Our analysis cannot definitely answer that question, but hints at several possible reasons. The share of Los Angeles households who commute by rail is relatively low, compared to cities with more established systems, and the rail network covers a very small share the county’s land area, so it is unclear to what extent new stations increase nearby land values. Because new station locations had high initial job and housing density, large-scale development

near stations may require complex and costly land assembly. Both the qualitative and quantitative results suggest that new development patterns may take years, even decades, to emerge around the stations. Zoning restrictions on the type and density of allowed uses may also constrain development near some stations. While Pasadena adopted new, density-friendly zoning for all station areas at the time that service began, Los Angeles has at best allowed piecemeal rezoning or variances around selected stations.