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Mobility, Accessibility and Disadvantaged Neighborhoods: Assessing Diversity in Transportation Related Needs and Opportunities

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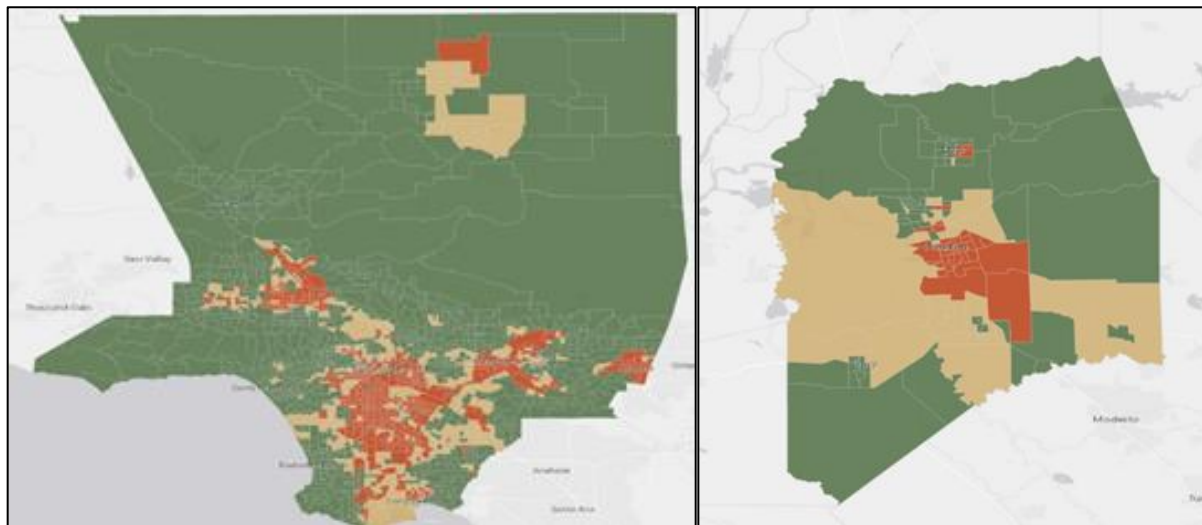
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Project Objective

This project examines the commonalities and differences among disadvantaged neighborhoods in mobility and access to opportunities. Our approach utilizes the concept of spatial-transportation mismatch (STM), which hypothesizes that spatial distance and poor transportation are barriers to regional employment, and educational and health-care opportunities. The study compares one highly urbanized county (Los Angeles) and one more agricultural agriculture based (San Joaquin). We compare disadvantaged neighborhoods with non-disadvantaged neighborhoods within each region, and disadvantaged neighborhoods across the two regions. (See map below: Los Angeles on left and San Joaquin on right.)



Neighborhood Disadvantage Status

- Disadvantaged
- Partially Disadvantaged
- Non-Disadvantaged

Problem Statement

The project produces insights that assist California to meet climate-change and social-justice goals, as articulated in Senate Bill 535 and other legislation. Racial equity has recently become more pressing. Both the office of California’s Secretary of Transportation and California Air Resources Board are committed to policies, programs, and investments that promote social equity, including prioritizing efforts to assist the most disadvantaged neighborhoods. This project contributes to those efforts by providing empirical information to assist state agencies to develop analytical methods that strengthen equity knowledge in transportation and land-use planning.

Research Methodology

To maximize real-world application, we adopted two policy-based indicators to create three classes of neighborhoods: disadvantaged, partially disadvantaged, and not disadvantaged. (See the table below for characteristics by neighborhood type.) The project uses bivariate tabulations to describe the variation in accessibility among policy-based definitions of disadvantaged neighborhoods. The project has five tasks: (1) access, assess, geocode, clean, and assemble research dataset; (2) utilize and test alternative STM indicators; (3) quantitatively examine diversity among neighborhoods; (4) make non-proprietary components of the dataset available; and (5) produce a final report, policy brief, and a paper to submit to an academic or professional journal. Some tasks have been modified because of the unexpected and significant disruptions caused by the COVID-19 pandemic, as well as new opportunities to examine STM.

	Los Angeles			San Joaquin		
	Disadv	Partially Disadv	Not Disadv	Disadv	Partially Disadv	Not Disadv
Race and Ethnicity						
NH White	7%	17%	43%	13%	31%	44%
Black	11%	10%	5%	10%	7%	5%
Hispanic	74%	58%	29%	61%	43%	35%
Asian	7%	13%	19%	12%	15%	12%
Nativity/Language						
Immigrant	41%	37%	29%	30%	22%	18%
Non-Citizen	25%	18%	10%	20%	11%	9%
LEP Households	20%	16%	9%	17%	8%	6%
Economic						
Average HH Income (in \$1,000)	60.3	73.6	125.6	50.9	81.6	93.6
Poverty Rate	24%	17%	9%	29%	15%	11%

The values in the table represent the average mean of the characteristics in each neighborhood type.

Results

The project’s empirical findings are consistent with the existing literature: Residents of disadvantaged neighborhoods suffer from STM in multiple arenas, especially those in rural areas. The analysis also finds considerable heterogeneity in the magnitude of inaccessibility in the two regions. Residents in disadvantaged San Joaquin tend to fare worse. There is noticeable heterogeneity in the magnitude of inaccessibility in the two regions. For example, residents in disadvantaged San Joaquin fare worse in employment outcomes, and young students fare worse in reaching quality education. Both of these outcomes are partially the product of larger structural factors: a relative lack of geographic compactness and density, as well as a lower-wage and less stable labor market and lower-performing school system. Households in San Joaquin respond to the more dispersed opportunities by relying more on car ownership and more vehicle miles traveled. The finding points to a reality that a “one-size-fits-all” approach is not sufficient to address the transportation needs and investment opportunities of disadvantaged communities.