UCLA INSTITUTE OF TRANSPORTATION STUDIES **Travel Adaptations and the Great Recession Evidence from Los Angeles County**

INTRODUCTION

Increases in fuel prices followed by the deep economic downturn of the Great Recession have raised concerns about the burdens of transportation costs on low-income families. The consequences for low-income households were potentially severe, with bottom-quintile household incomes declining 14.5 percent from 2000 to 2010.

We examine the behavioral responses of families in Los Angeles County to transportation cost burdens. We draw on a number of data sets, including vehicle registration data from the California DMV, Smog Check data from the California Bureau of Automotive Repair, fuel economy information from the U.S. EPA, as well as demographic and economic data from the 2005-2009 ACS.

We address the following questions:

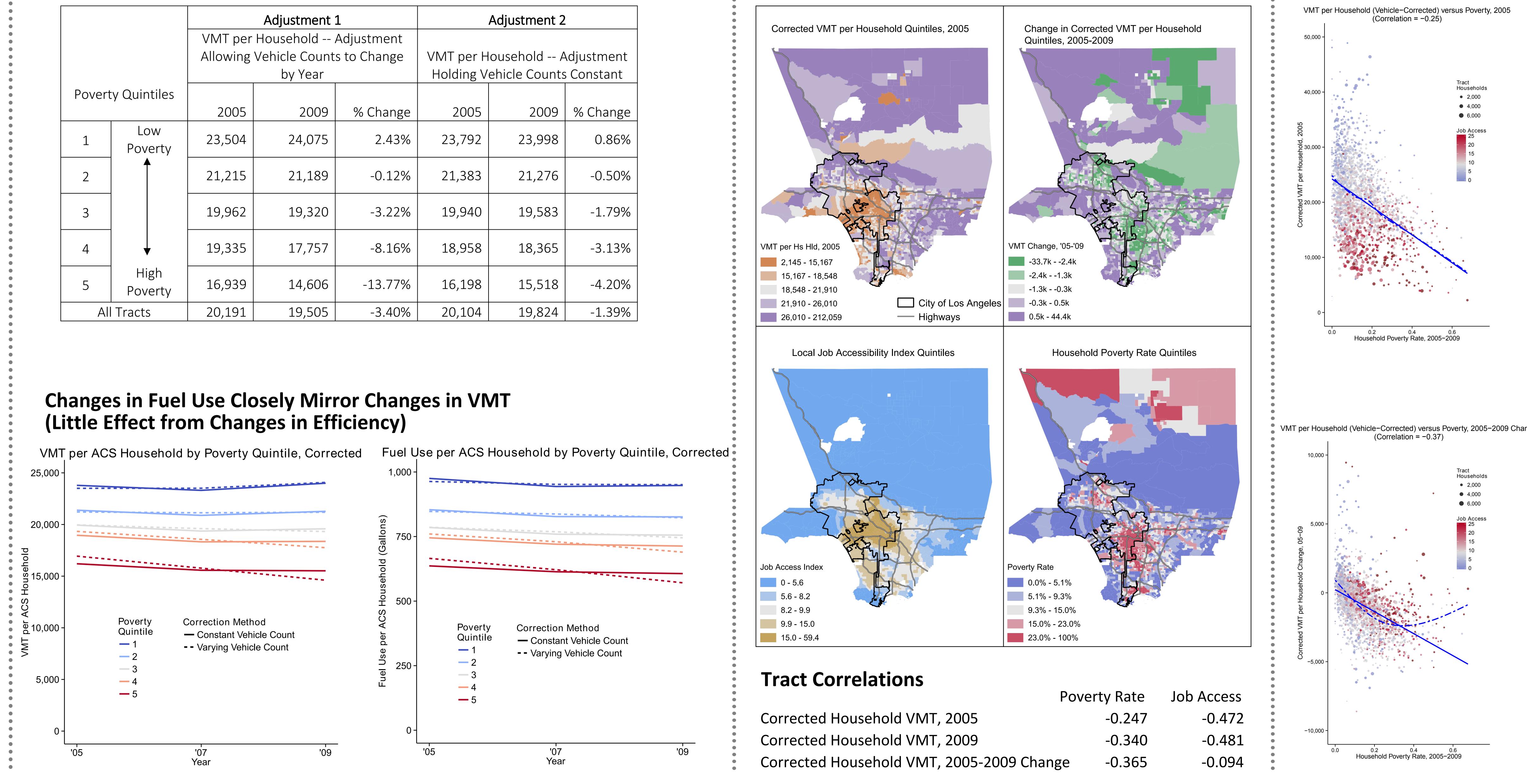
- How do changes in VMT per household vary by neighborhood poverty levels and accessibility?
- Do poor neighborhoods in high-access areas show greater or lower levels of change than do those in low-access areas?
- What role do changes in fleet fuel efficiency play in changes in fuel consumption and associated costs of travel? How do these changes vary by neighborhood poverty?

METHODS

In calculating patterns of household VMT and fuel use at the neighborhood level, we rely on detailed DMV vehicle records from 2005, 2007, and 2009. Our methodology consists of the following steps:

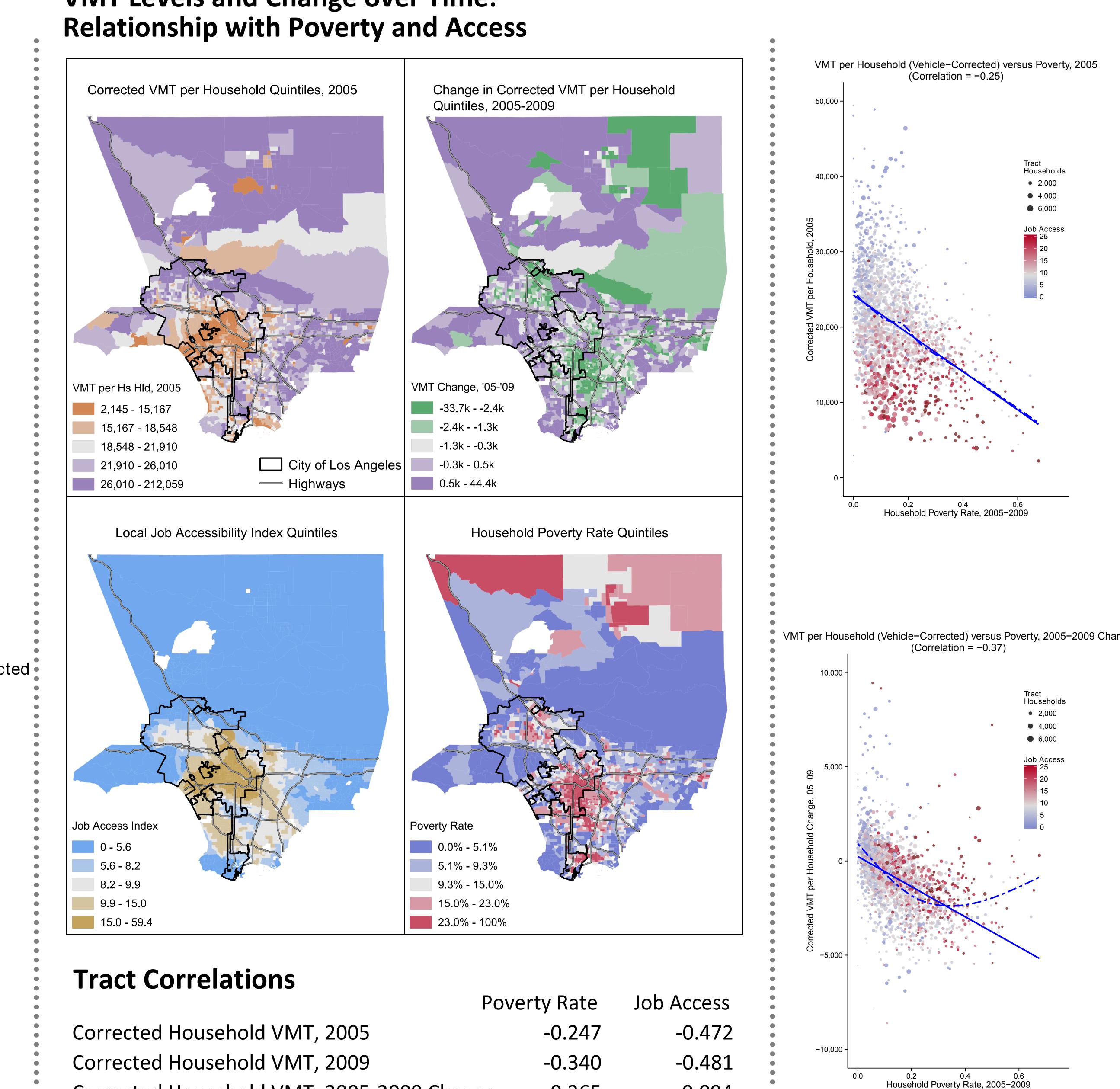
- Aggregate vehicle to common households by address records, and attach anonymized records to census tracts.
- Clean household records by removing those with non-personal vehicles and those with more than 5 vehicles.
- Estimate annual VMT for each vehicle by prorating changes in paired odometer readings.
- Perform multiple imputations to estimate VMT for vehicles with one or fewer valid odometer readings (20.2% of sample).







FINDINGS



VMT per Household Change: **Two Estimates Adjusting For Incomplete DMV Sample**

		Adjustment 1			Adjustment 2		
		VMT per Household Adjustment					
		Allowing Vehicle Counts to Change			VMT per Household Adjustment		
		by Year			Holding Vehicle Counts Constant		
Poverty Quintiles							
		2005	2009	% Change	2005	2009	% Change
1	Low Poverty	23,504	24,075	2.43%	23,792	23,998	0.86%
2		21,215	21,189	-0.12%	21,383	21,276	-0.50%
3		19,962	19,320	-3.22%	19,940	19,583	-1.79%
4		19,335	17,757	-8.16%	18,958	18,365	-3.13%
5	High Poverty	16,939	14,606	-13.77%	16,198	15,518	-4.20%
All Tracts		20,191	19,505	-3.40%	20,104	19,824	-1.39%

VMT Levels and Change over Time:

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SUMMARY FINDINGS

- Household vehicle travel is substantially lower in high-poverty neighborhoods.
- The gap between high- and low-poverty neighborhoods widened from 2005 to 2009.
- Fuel use per household is highly correlated with VMT place-level differences in vehicle efficiency have little effect on tuel use.
- Neighborhood accessibility is highly correlated with crosssectional travel, but shows little relationship with changes in travel from 2005 to 2009.
- Households in high-poverty, low-access neighborhoods travel substantially more than those in high-poverty, high-access neighborhoods, and more than the average household county-wide.

POLICY IMPLICATIONS

- Travel demands are substantially lower in high-access neighborhoods. Vouchers and other affordable housing policies should focus on providing housing opportunities in these locations.
- Given the travel demands on poor households in inaccessible neighborhoods, policies that offset the high costs of car ownership and use should be pursued, such as pay-per-mile auto insurance and support for car-sharing services.
- Personal auto substitutes should be developed, especially in high-access neighborhoods, as a substitute for household car travel

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