UCLA INSTITUTE OF TRANSPORTATION STUDIES

Walk on

Are changes in neighborhood characteristics associated with changes in walking?

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RESEARCH QUESTION

Is there a relationship between changes in neighborhood characteristics and changes in walking mode share in California?

MOTIVATION

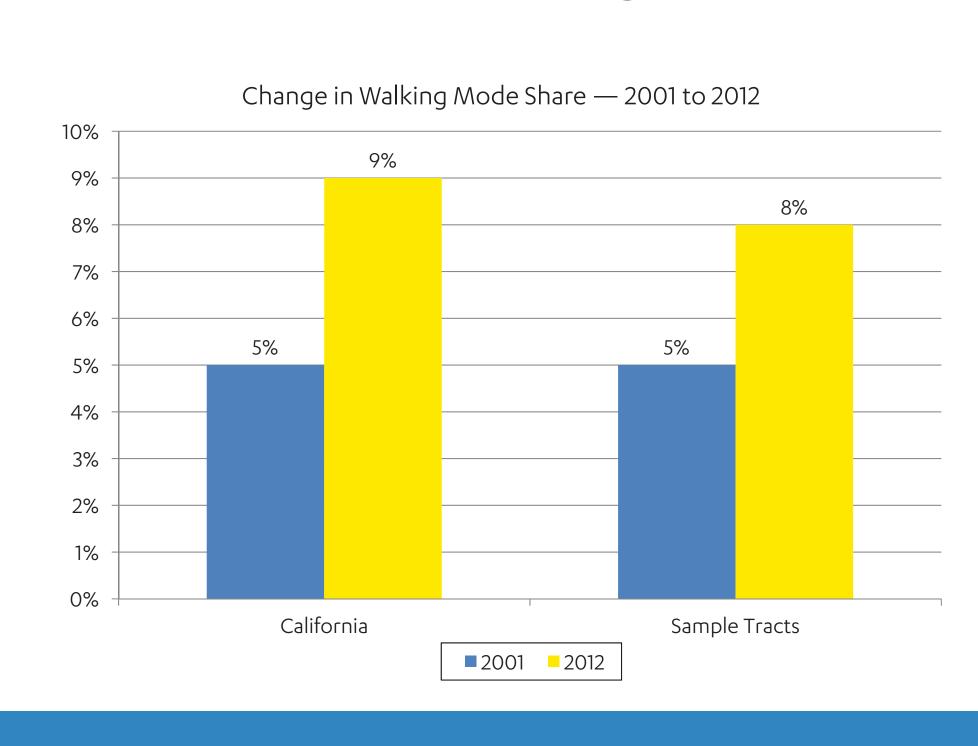
Walking is an important—and often overlooked—mode of travel.

- It represents 9% of all trips in California.
- There is a relationship between walking and a host of outcomes including lower obesity rates, improved quality of life, and better access to opportunities.
- Walking produces no greenhouse gas emissions.

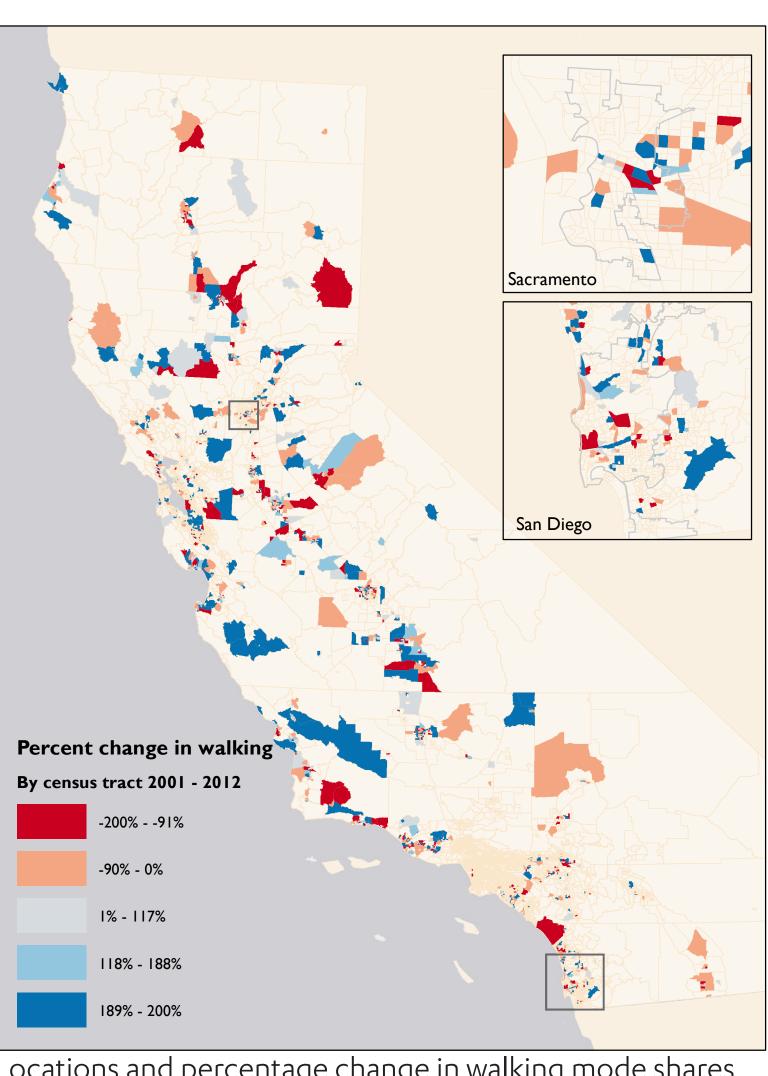
Walking rates have increased over time.

- In the U.S. the percentage of trips taken by foot grew from 9% of all trips in 2001 to just over 10% in 2009
- (National Household Travel Survey, 2001 and 2009).
- In California walking increased from 5% of all trips in 2001 to 9% of all trips in 2012 (CA Household Travel Survey 2001 and 2012).

Very few studies examine the determinants of this change.



APPROACH



Locations and percentage change in walking mode shares in sample tracts between 2001-2012.

All data tabulated into consistent 2010 census boundaries.

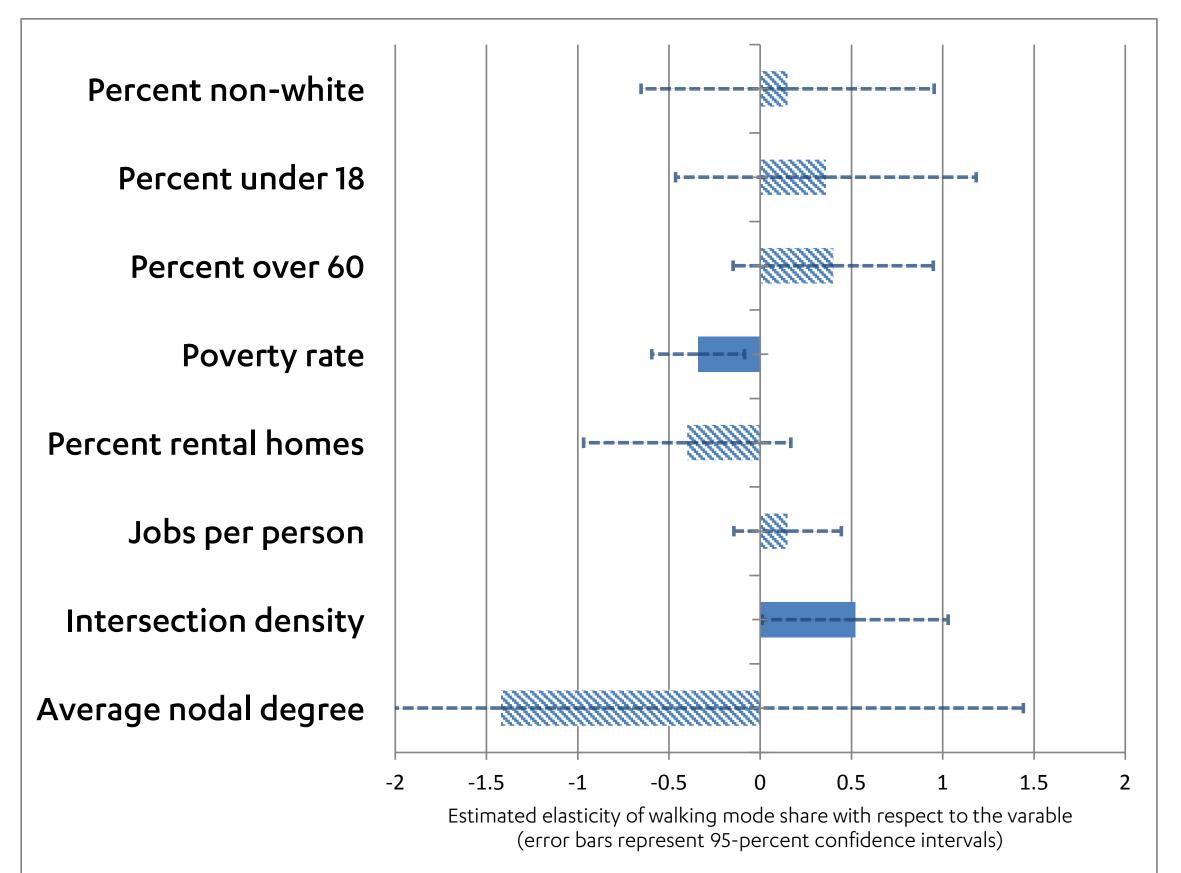
- *Data*: 2001 and 2012 California
- Unit of analysis: Census tracts

Household Travel Survey

- Criteria for inclusion: Tracts with at least 20 survey day trips in both years
- Variable of interest: Walk trips, trips in which all segments took place on foot

RESULTS AND FINDINGS

Tobit Regression Model Results



Solid bars represent significant variables. Intersection density significant at the .05 level Poverty rate significant at the .001 level

Walking mode share increased the most in neighborhoods where (a) the poverty rate declined and (b) accessibility (measured by intersection density) increased.

DISCUSSION

Poverty finding:

- •Many low-income neighborhoods are resource poor and lack proximate opportunities that are easily reachable on foot. Greater reliance on motorized transportation may be a necessity in these areas.
- •Concerns about personal and traffic safety in low-income areas may discourage walking.
- •Results may differ if walking trips to access transit were included.

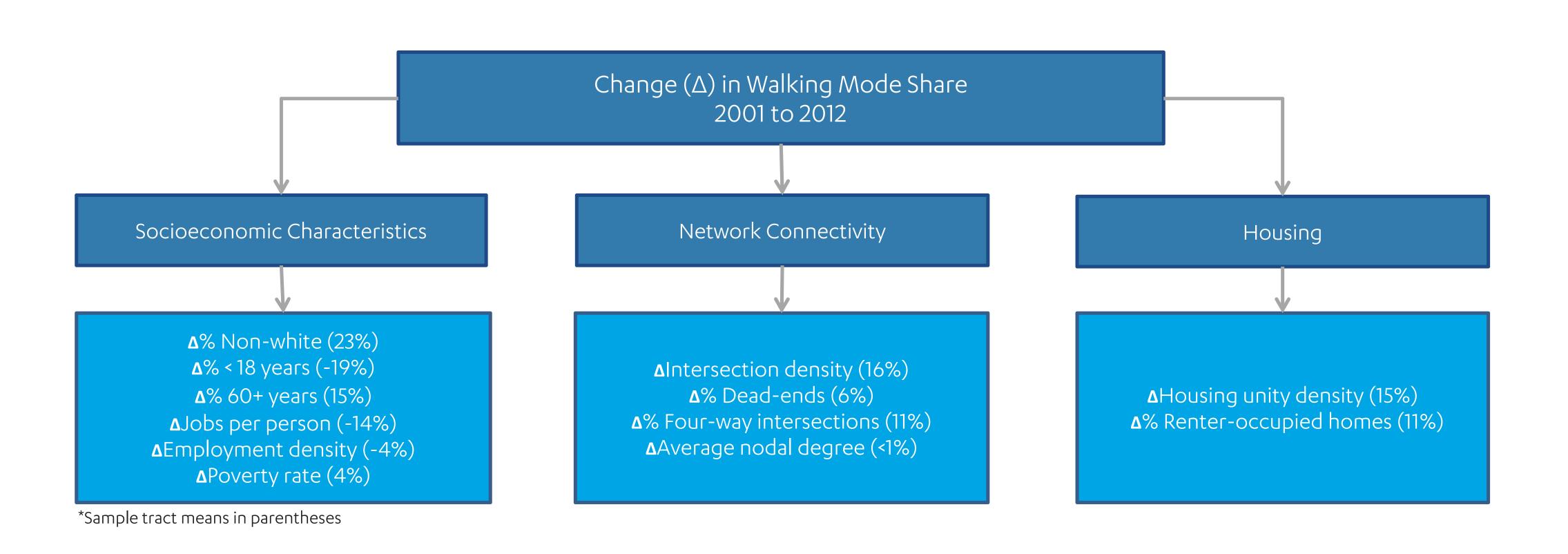
Accessibility finding:

•Increased intersection density suggests that pedestrian routes are becoming more direct and, therefore, more easily traveled on foot.

MODEL OVERVIEW

Dependant variable:

Change in walking mode share in sample tracts between 2001 and 2012.



RECOMMENDATIONS

- •Enhance the pedestrian environment in low-income neighborhoods to increase personal and traffic safety.
- •Continue efforts to increase intersection density and improve pedestrian route directness.
- •Conduct additional analysis on (a) the role of walking in first- and last-mile connections to transit & (b) the amount & intensity of walking to assess the potential effects of walking on public health goals.
- •Improve walking data by increasing travel survey sample sizes and maintaining archived inventories of the pedestrian environment.

ACKNOWLEDGMENTS

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