# Compact, Accessible, and Walkable Communities Help Support Gender Equality

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## Issue

In California, Senate Bill 375 mandates regional planning organizations align their transportation plans with sustainable land use and development strategies to achieve reductions in greenhouse gas emissions. In response, the Southern California Association of Governments' 2016 Regional Transportation Plan/Sustainable Community Strategy directs nearly 50% of housing and employment growth between 2010 and 2040 into walkable and compact neighborhoods within a one-half mile walking distance from well-serviced transit stops. This approach to land use development can encourage shorter driving trips, greater transit usage, and increased walking and cycling as a result of daily activity destinations being clustered near residential and work locations.[1]

Another bi-product and benefit of compact and accessible communities may be improving gender equality related to travel and activity patterns. Prior research shows segregated and dispersed land uses (i.e., suburban sprawl) can exacerbate gender disparities in daily household travel by separating the public and private realms, and can also constrain women to their immediate neighborhoods.[2,3] In contrast, neighborhoods with pedestrian accessible mixes-use centers have been shown to help counter social isolation of women in suburbia.[4] In addition, compact communities with denser land use and better transit service has been shown to reduce the disproportionate amount of chauffeuring women conduct on behalf of the household.[5]

## Key Research Findings

A first of its kind study was conducted by researchers at UC Irvine to assess whether compact development is associated with reduced gender disparities in terms of travel behavior. The daily activity space (i.e., the geographic distribution of travel) of 1,316 married heterosexual couples in Southern California were examined using the 2012 California Household Travel Survey. Differences in the size (i.e., square miles of the activity space), centeredness (i.e., distance between the center of the activity space and the home location), and compactness (i.e., degree of concentration of activity locations around the home location) of daily activity spaces were examined by household regional accessibility and local accessibility (see Figure 1). Key research findings and insights from this research are presented as follows:

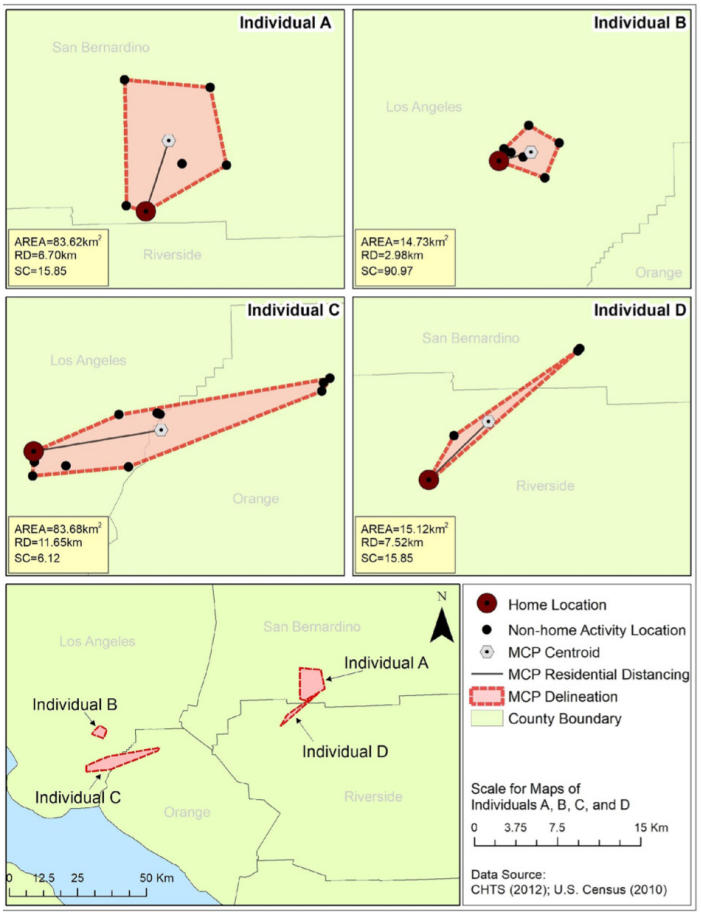


Figure 1. Comparison of three activity space indicators for four individuals. Note: MCP= minimum convex polygon used to measure activity space, RD=residential distancing, SC=spatial concentration

***Married couples living in more accessible areas have greater equality in the size and centeredness of their activity spaces.*** Compared to households in less compact areas, households living in areas with greater regional accessibility and neighborhood walkability have smaller, more centered, and more compact spaces overall. A ten unit increase in residential Walk Score was associated with a 12-18% decrease in activity space size, a 6-8% decrease in residential distancing (e.g., the distance between the center of the activity space

and the home location), and a 12-13% increase in spatial concentration for both men and women. These results are consistent with previous studies which suggest residents of areas with more urban features (compared to suburban areas) focus their travel and activities near their residence.[6,7,8,9]

***Compact, accessible communities provide a greater windfall to women than men in terms of concentrating travel.*** The concentration of male activities was 117% greater in areas with high regional accessibility compared to areas with low accessibility while the concentration of female activities was 256% greater in areas with high regional accessibility compared to areas with low accessibility. In addition, as the residential Walk Score increased by ten units, the activity space size of men and women decreased by 12% and 18%, respectively. These results support the assertion that women may be more likely than men to utilize nearby services if and when those services become available.

***Socio-demographics, activity types, and regional accessibility play an important role in gender differences in travel and activity patterns.*** The presence of children was strongly associated with more constrained activity space and more activities closer to home for women but not for men. As women undertook more shopping trips than their male counterparts, they were more likely to center their activities closer to their residence relative to their husbands. These results imply that, consistent with previous research, women continue to experience greater spatial constraints partly due to the responsibility for household-related tasks. [10, 11, 12, 13]

## Further Reading

This policy brief is drawn from the research report "Do Compact, Accessible, and Walkable Communities Promote Gender Equality?" authored by Douglas Houston and Ashley (Wan-Tzu) Lo from the Department of Urban Planning and Public Policy at the University of California, Irvine. The full report and this policy brief can be found here: http://www.ucits.org/research-project/the-impact-of-urban-form-and-travel-mode-on-spatial-activity-travel-patterns/.

For more information about the findings presented in this brief, please contact Douglas Houston at houston@uci.edu.


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