Measuring Welfare Effects of Substitute Recreation Sites Using Spatial Travel Cost Model

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Introduction

- The objective is to estimate welfare effects of substitute recreation sites
- by incorporate spatial interdependencies in the number of visits that are positive integers and truncated at zero

Spatial Travel Cost Model

- Spatial heteroskedastic autocorrelation consistent (HAC) covariance estimators extended to the negative binomial-2 heteroskedastic robust covariance estimator (Conley, 1999, Kelejian and Prucha, 2007, Lambert and McNamara, 2009)

Case Study: Allegheny National Forest

- 2001 and 2005 National Forest Visitor Use Survey

Detect Outliers

Existing tools used in the travel cost literature

- 1,000 miles away from a recreational site to visitors' origin
- Outside the state (Pennsylvania)
- Top 5% of most frequent visitors

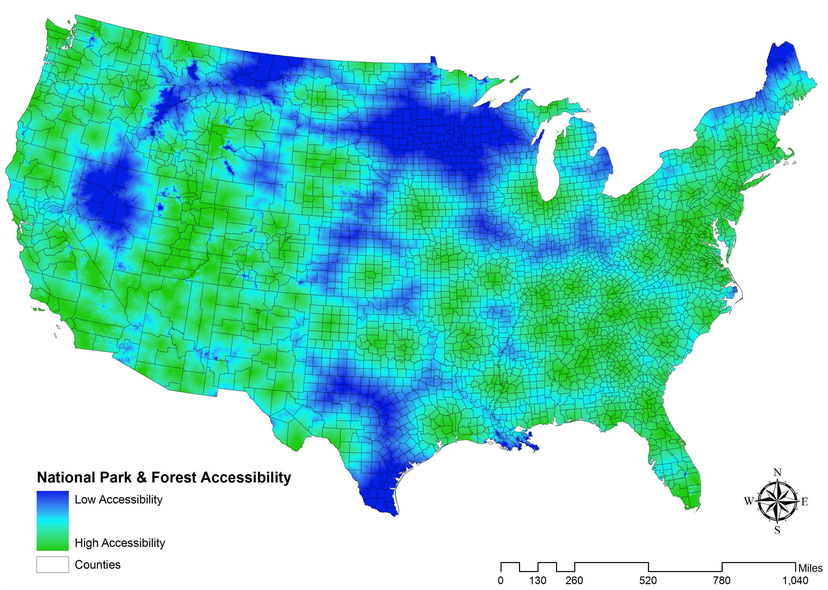
Approaches typically used in statistics

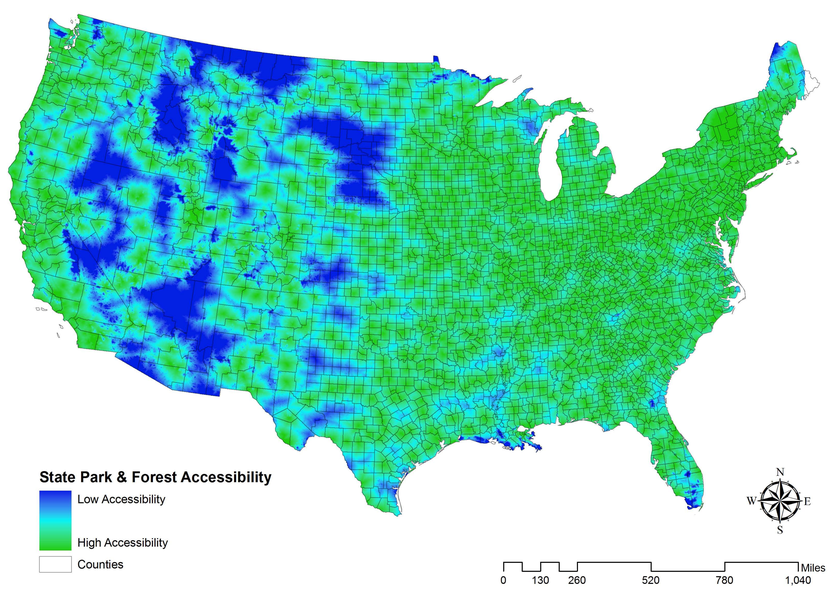
- Cook's D and Dfbeta

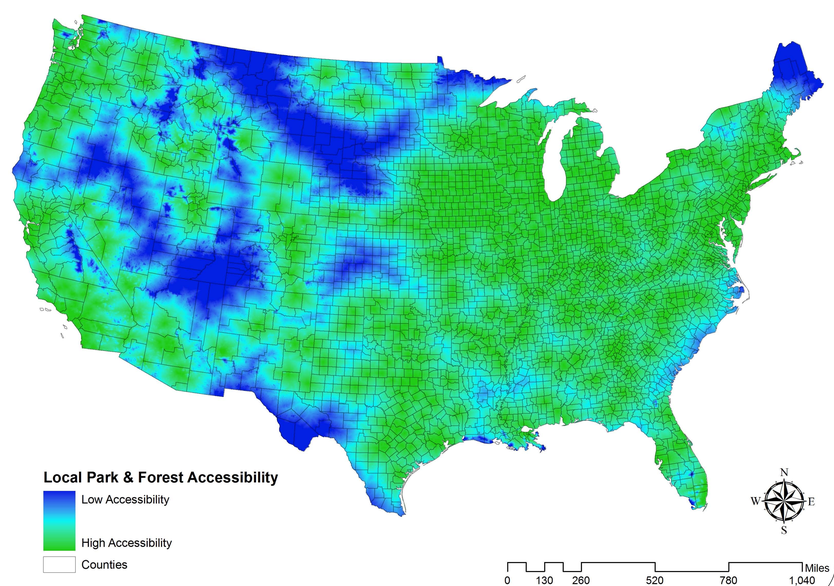
Cluster analysis

- *k*–means clustering

Measure Substitutability of Park and Forest







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