

Property values surrounding bike lanes in Columbus, Ohio

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Background & Research Question

In the last few years the city of Columbus, Ohio has prioritized bike infrastructure by implementing bike share programs and constructing new bike lanes. Some have argued, however, that bike infrastructure contributes to factors of gentrification like rising rents and displacement of people for whom this infrastructure does not serve. Is this the case for Columbus? **To what extent does a change in property values correlate with the construction of bike lanes nearby?**

I will be evaluating property values around two pairs of bike lanes constructed in the fall of 2015. Both lanes are dedicated painted lanes on the road. The lanes on 4th and Summit streets are protected lanes -- the first of their kind in the city.

Data & Methods

Data:

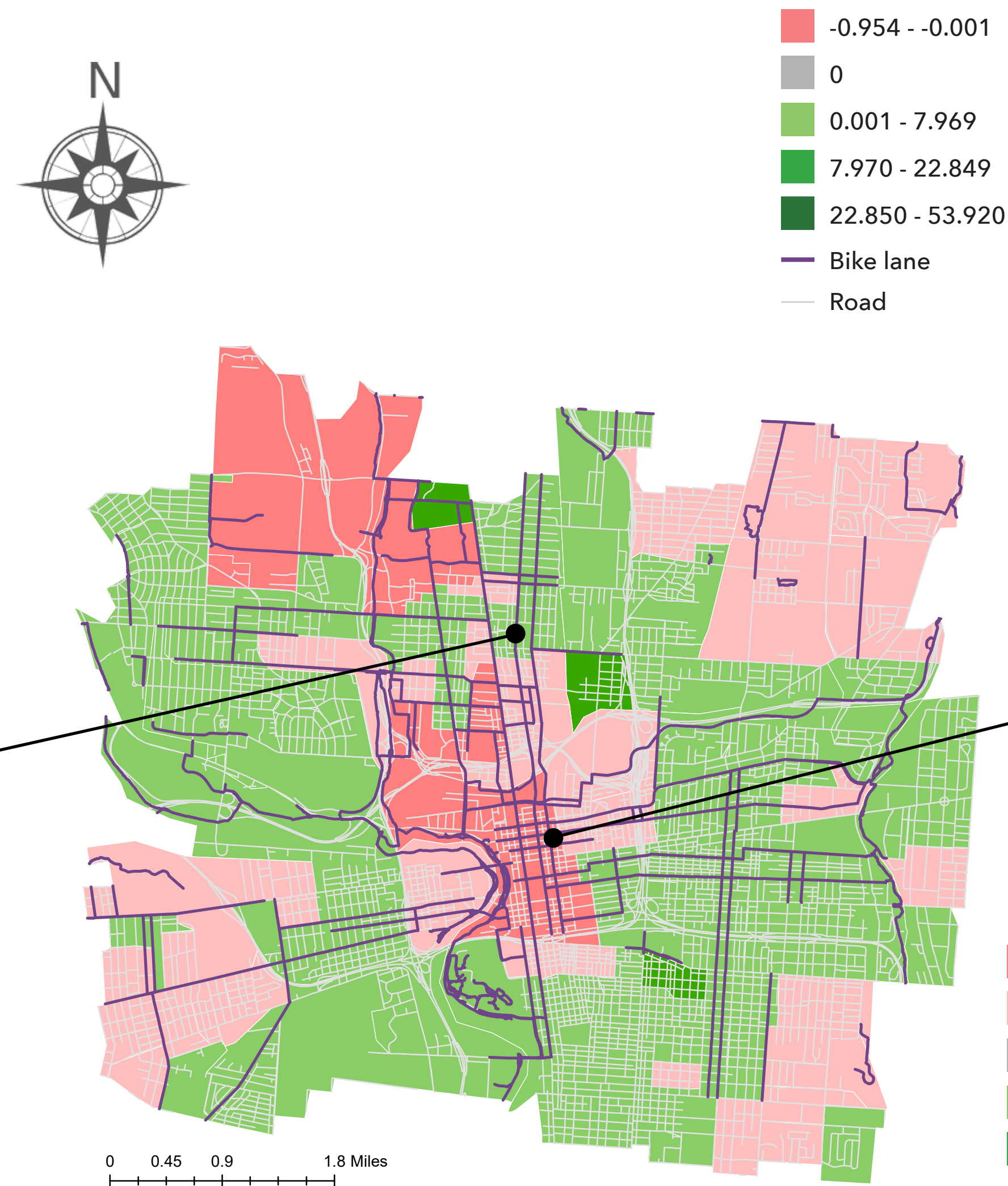
- 2014 and 2017 appraisal values of parcels in Columbus, Ohio (Franklin County Auditor)
- Columbus bike lanes (Columbus open GIS)
- 2016 census block group data (US Census)

Methods:

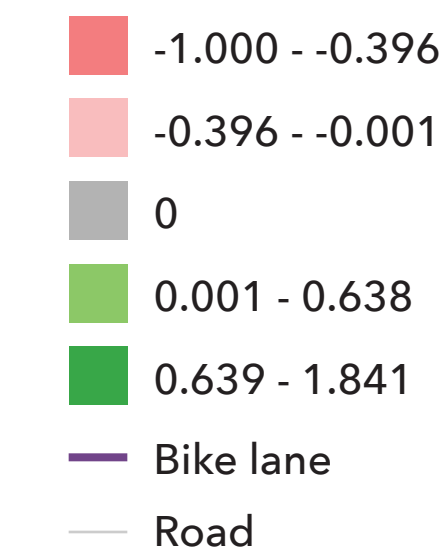
Looking at properties within half a mile of bike lanes, I mapped data from the Franklin County Auditor of parcel appraisal values in 2014 and 2017. After a tabular join, I calculated the difference between the property values. After factoring out properties with no value and extreme outliers, I mapped the properties along with bike lanes.

For reference, I calculated the overall change in property value in Columbus. I conducted a spatial join of Columbus block groups and parcel data for both 2014 and 2017. I then calculated the average property value in each block group for each year and found the difference.

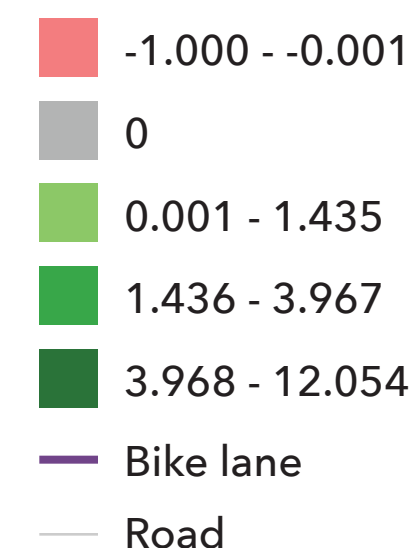
Rate of Change of Property Values Surrounding Long and Spring St Bike Lanes



Rate of Change of Average Property Values per Block Group in Columbus



Rate of Change of Property Values Surrounding 4th and Summit St Bike Lanes



Previous Research

Similar, more intensive studies using GIS and a hedonic price modelling have found that public trails and greenways (including bike lanes) have either no effect or a positive effect on property values.

Lindsey, Greg. "Property Values, Recreation Values and Urban Greenways." *Journal of Park and Recreation Administration* 22, no. 3 (2004): 69-90. Accessed December 1, 2017.

Shi, Wei, "Impact of Bike Facilities on Residential Property Prices" (2017). TREC Friday Seminar Series. 110.

Racca, David P. Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas . Report. Center for Applied Demography and Research , University of Delaware. Newark, DE: University of Delaware, 2006.

Key Findings

- Overall, average property values of areas surrounding downtown Columbus have decreased by \$4,399 from 2014 to 2017 with an average rate of change of 0.090.
- Surrounding the protected bike lanes on 4th and Summit streets, property values have increased an average of \$30,586, a rate of change of 0.257.
- Surrounding the bike lanes on Long and Spring streets, property values have increased and average of \$13,160, a rate of change of 0.275.

While this study shows that property values surrounding bike lanes have generally increased, there is little evidence to support that bike lanes are a direct cause of this increase. This study would have been more complete had several factors been considered, including land use changes, neighborhood characteristics, change in population, and property sale prices.

This research hopes to point towards a possible correlation between the construction of bike lanes and a change in property values. With this information, city planners will have a better understanding of how bike lanes could function as an indicator of higher property values.