Eviction Rates in Charleston, South Carolina by Block Group in 2009, 2013 and 2016

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GIS 101: Intro to GIS

Background

In April of 2018, sociologist Matthew Desmond at Princeton University launched the first-ever publicly accessible database of evictions in the United States. Called the "Eviction Lab," this database reveals that South Carolina currently has the highest eviction rate in the country, at 8.87%. Out of 83 million court-ordered evictions nationwide, North Charleston's 16.5 percent eviction rate rendered it the number one eviction market in the country. This database also shows that South Carolina's eviction rate has doubled over the last four years alone, given that housing costs have increased at a higher rate than wages. In Charleston and North Charleston, it is clear that renters will continue to face steep increases in eviction filings over the next several years. For my final project this semester, I asked: Were eviction rates* in Charleston, South Carolina clustered by Census block group in 2009, 2013 and 2016? I was also interested in whether the city's African-American population appeared to be at a high risk for eviction, given recent documentation of Black residents being displaced by pressures of gentrification in the city (Barbato 2015).

Methods

In total, I made nine comparative maps that collectively explore how rates of eviction and percentages of African-American residents in Charleston and North Charleston changed between 2009, 2013 and 2016. I created these maps using the data collected by Eviction Lab, which I downloaded in the form of an Excel spreadsheet. This spreadsheet contains total population, percentages of racial demographics, poverty rate, median rent, percent rent burdened, percent renter occupied, median household income, median property value, eviction filings, total evictions, eviction filing rates and total eviction rates— all by block group. Because this information was in spreadsheet linked with block group, I was able to join my downloaded table with the Charleston block group shapefile I had downloaded from Tufts' Geodatabase through the shared block group ID. After properly exporting and projecting this joined layer, I was able to visualize quintiles of eviction rates per block group for each year (2009, 2013, 2016). I then used the Cluster and Outlier Analysis tool to visualize each year's Local Moran's I value for eviction rate. Finally, to explore the spatial distribution of Black residents in the city, I re-symbolized the joined block group layers to display the percentages of African-American residents living in those block groups for each year.

Results and Discussion

Primarily, my most important spatial finding was that, despite the fact that eviction rates across the entire region increased significantly at each chronological interval, the cluster maps suggest similar patterns of clustering across the three year intervals. Particularly in 2013 and 2016, higher eviction rates seemed to be concentrated in the Northern and Downtown Charleston areas. Given that the rates of eviction in 2016 were roughly twenty times higher than they were in 2009, seeing that they were similarly clustered at each chronological interval indicates that eviction rates have increased or remained relatively stable in the same areas. The extent to which the eviction rates increased can also be seen in these maps— while the highest quintile for eviction rates in 2009 was 16.91, that number jumped to 397 by 2016. In fact, these drastic changes in eviction rates between 2009 and 2016, especially between 2013 and 2016, proved incredibly challenging to represent comparatively; without reading the legends of these maps, it may appear as though significant changes have not occurred. The maps showing percentages of African-American residents by block group in 2009, 2013 and 2016 illustrate relatively little spatial change between 2009 and 2013, but significant spatial shifts between 2013 and 2016. By 2016, most of the block groups on the city's margins were at least 50% African-American. Compared to the fact that many block groups in the center of Charleston were at least 50% African-American in 2009, we can conclude that the center of Charleston became less Black over the same period of time that eviction rates increased in that area. That these shifts appear correlated may suggest that Black residents have been significantly— perhaps disproportionately— impacted by increasing eviction rates in the area. To explore this question further, it would be useful to compare the spatial distribution of other racial demographic groups over the same period of time. Other useful spatial inquiries with this data might include changes in median household income and in housing values by block group over this time period. Further, it could be useful to locate eviction courts and explore people's physical and financial access to eviction lawyers in order to mitigate the number of evictions in the area. Some sources of error in my work include the fact that Eviction Lab manually entered eviction data from court records, which may have led to administrative inconsistencies. Moreover, because "eviction rate" is a function of the number of renter homes in an area, higher rates may just indicate a smaller number of renter homes in the area. Finally, another source of error could be that the Census block groups and other measurements of demographic data changed between 2009 and 2016.

*Eviction Rate

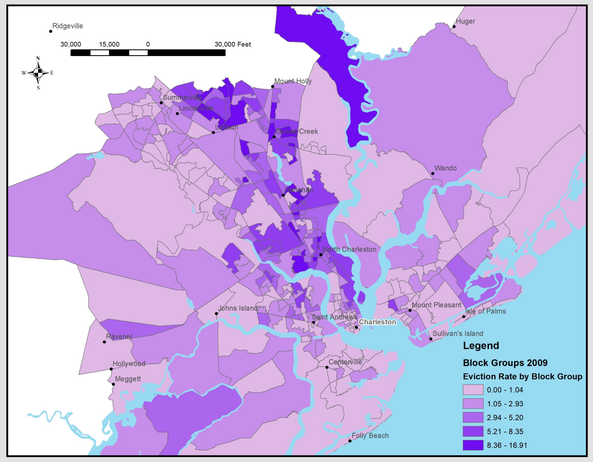
Eviction Lab defines "eviction rate" as the number of evictions per 100 renter homes in the area. That means that very high rates could be the result of a large number of evictions, or of a small number of renter homes in an area. Rather than reflecting the number of eviction judgements issued, the eviction rate indicates that renters were ultimately ordered to leave the property. It is possible to have an eviction rate over 100 in areas where seasonal renting is common and there may be multiple evictions recorded for the same home. The numbers of renter home in the area were sourced from the U.S. Census and ESRI Business Analyst demographic estimates (Eviction Lab 2018).

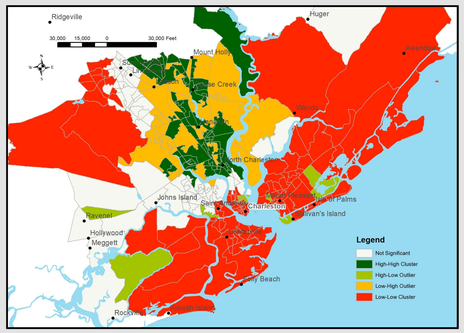
From top to bottom:

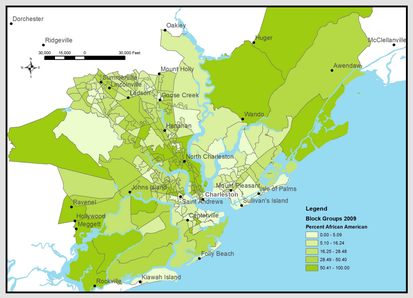
Eviction Rates by Block Group, 2009

Clustering of Eviction Rates, 2009

Percent African-American, 2009





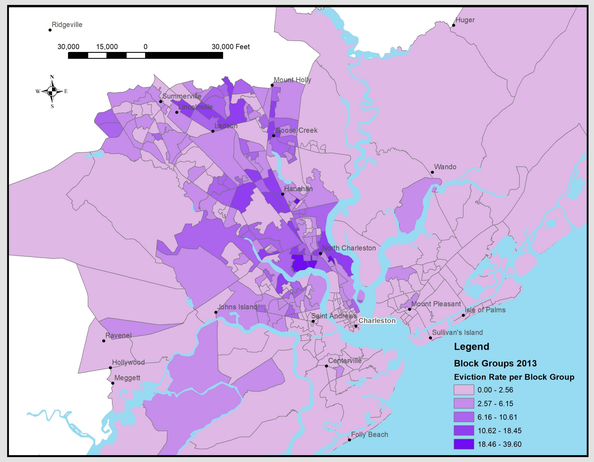


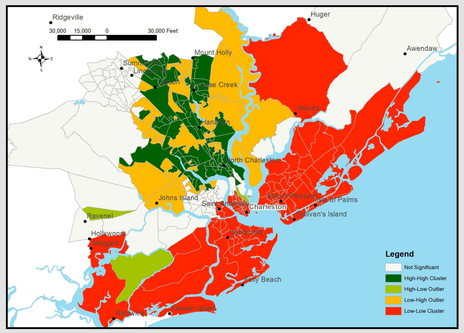
From top to bottom:

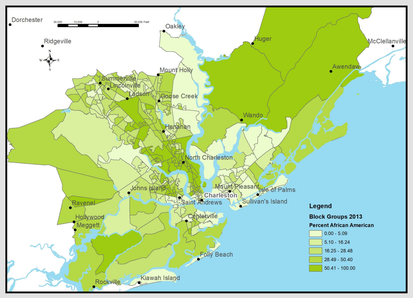
Eviction Rates by Block Group, 2013

Clustering of Eviction Rates, 2013

Percent African-American, 2013





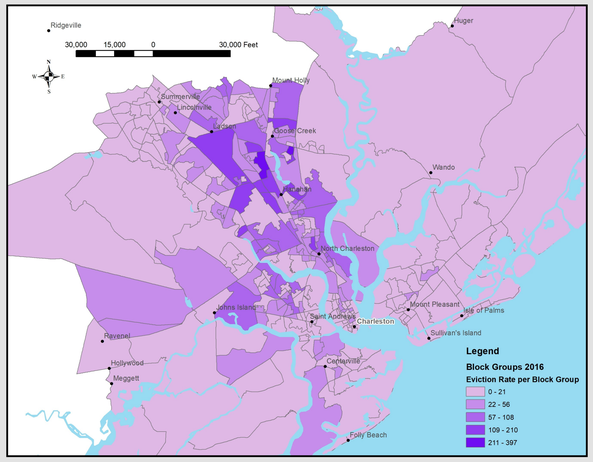


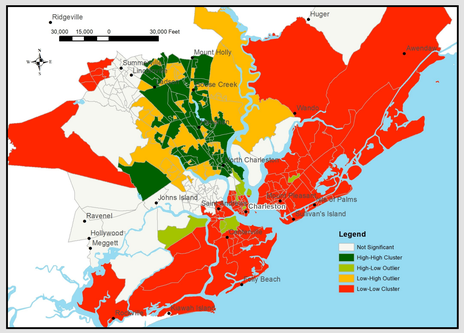
From top to bottom:

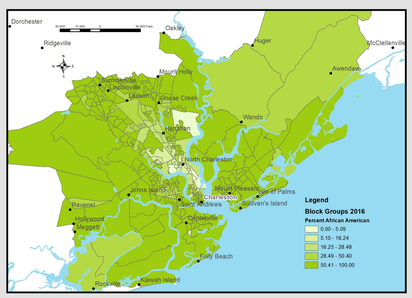
Eviction Rates by Block Group, 2016

Clustering of Eviction Rates, 2016

Percent African-American, 2016







References:

Barbato, Lauren. June 18, 2015. "What Percentage Of Charleston Is Black? There's Been A Radical Shift In The City's Racial Demographics Recently." https://www.bustle.com/articles/91226-what-percentage-of-charleston-is-black-theres-been-a-radical-shift-in-the-citys-racial-demographics.

Eviction Lab. April 7, 2018. "Methodology Report. https://evictionlab.org/docs/Eviction%20Lab%20-Methodology%20Report%20v.1.0.0.pdf.

Data sourced from: U.S. Census Bureau, EvictionLab, ESRI Business Analyst, Tufts M Drive

Projection: NAD 1983 State Plane , Lambert Conformal Conic